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A Lecture

ON

THE ÆSTHETICS OF ANÆSTHETICS.

Delivered at the London Hospital on Feb. 25th, 1910,

BY FREDERIC W. HEWITT, M.V.O., M.A., M.D. CANTAB.,

CONSULTING ANÆSTHETIST AND EMERITUS LECTURER ON ANÆSTHETICS AT THE HOSPITAL; PHYSICIAN-ANÆSTHETIST, TO ST. GEORGE'S HOSPITAL.

GENTLEMEN,—The somewhat paradoxical title which I have ventured to choose for this lecture needs, perhaps, a little explanation. If by the term anæsthetics we mean to imply those agents which are capable of producing either a generalised or a localised insensibility to pain during surgical procedures it is perhaps difficult to imagine how these anæsthetics can possess any æsthetic attributes or associations. But I shall hope to show you that in administering anæsthetics, whether for minor or for major operations, there is an opportunity—I had almost said a necessity—for the exercise of æsthetics. I hope to prove to you, indeed, that the more grave and distressing the case requiring our services the greater is the need for the exercise of æsthetic principles and details in anæsthetisation. Let us first of all be clear as to what we mean by æsthetics. Æsthetics may, perhaps, best be defined as the science by which the artist deduces from nature and taste the rules and principles of the art he practises. But are we entitled, you may ask, to regard the administrator of an anæsthetic as an artist? My reply to this criticism is that it is perfectly possible for us, in the interests of those who place themselves in our hands for the prevention of pain, not only to make ourselves artists in this branch of practice, but to go farther than this and to attempt to bring the art of anæsthetising up to such a standard that, like other arts, it may be practised with æsthetic perception. Have we not, in fact, as administrators of anæsthetics, an almost ideal field for the exercise of the science of æsthetics? Our immediate predecessors have handed down to us the marvellous discovery of the means of rendering suffering humanity absolutely oblivious to the procedures of the surgeon; we have, at our command, the most varied methods of rendering patients unconscious; and we have, as our subjects, those who, from the very nature of the circumstances in which, unhappily, they find themselves placed, are most likely to appreciate the various niceties, if I may so term them, of the art of anæsthetising. Only those who have undergone surgical operations can fully realise the importance of attending to the numerous points to which I now propose to draw your attention.

The first proposition I would submit to you is that, in the interests of our patients, generalised anæsthesia, with its attendant unconsciousness of all the surroundings of a surgical operation, is immeasurably preferable to local or regional anæsthesia, and that it is to developments in the former system rather than to those in the latter that we should devote our attention if we wish to bring the science of surgical anæsthesia up to its legitimate level. I take it to be one of the principal duties of the medical man to treat his patients in such a way that they are subjected during that treatment to the very minimum of mental and physical distress. I do not deny that under certain exceptional circumstances—as, for example, when a general anæsthetic cannot safely be given, when the patient has an invincible horror of being rendered unconscious, or when a medical man is single-handed—there may be a good reason for preferring a local to a general anæsthetic. But when, as is fortunately the case in this country, we have at our disposal safe and efficient methods of producing general anæsthesia, and when, as is also the case, we are continuously sending out into practice men who have been properly educated in such methods, are we fulfilling our duties to our patients in countenancing for routine use the analgesic as opposed to the anæsthetic system of pain prevention? Are we taking into account, moreover, that important aspect of the question—hardly admitting of consideration on this occasion—the special risks of spinal analgesia? I submit that we should be departing from the great traditions of our profession in replacing general by local anæsthesia for routine use. The fascinating novelty of spinal analgesia, its advantages to the surgeon in abdominal and certain other operations, and its undoubted success in a large proportion of the cases in which it has been employed, are doubtless weighty considerations. But do its supporters think sufficiently of the acute mental disturbance with which its employment is generally associated? I have myself witnessed, particularly in children, such pitiable apprehension and terror in connexion with spinal analgesic methods as to satisfy me that, at all events as at present practised, such methods belong rather to the pre-anæsthetic than to the anæsthetic period of modern surgery. Not long ago I witnessed what was to me a most distressing sight in the theatre of one of our leading hospitals. A patient who had been kept waiting for some time in the anæsthetising room prior to a rectal operation under spinal analgesia was wheeled into a crowded theatre. He was literally blue from fright, and the surgeon who was deliberately measuring the quantity of fluid to be injected was at the same time remarking on the cyanotic colour of the face of his patient. The first attempt to introduce the needle failed and it had to be withdrawn and re-introduced, a proceeding which was obviously painful although of short duration. The patient then vomited. It is only fair to say that the subsequent anæsthesia was perfect, but the cyanosis and mental distress persisted and convinced me that whatever might be the merits of the method, there was something almost inhuman in its application. Upon the Continent, where general anæsthesia is not so fully developed as in this country and where, as a result, accidents and unsatisfactory experiences are far more common, it is not surprising that intra-spinal and other methods of local anæsthetisation should have obtained such a firm foothold. I cannot help thinking, too, that there are some surgeons who, being comparatively deficient in sensitiveness and accepting surgery and its various procedures as necessarily unpleasant, fail to realise the necessity of reducing or of preventing as far as possible all mental as well as all physical pain in the exercise of their professional services. To professional men of this type a novel method of anæsthesia may appeal with no small force, even if the means by which it is applied are not altogether unattended by distress to their patients. Patients themselves are, as a rule, the worst judges of the respective merits of rival therapeutic systems, and in the case of the two systems under consideration they can hardly be expected to pronounce decisions unless, as is rarely if ever the case, they have experienced both for precisely similar operations performed under precisely similar conditions except as regards the nature of the anæsthesia. The presence of normal consciousness during the preparation of the part to be operated upon, during the introduction and possibly the re-introduction of the needle of the syringe, and during the operation itself, attended as it may be by unforeseen difficulties possibly demanding consultations between those engaged in the operation, is by no means free from grave objections. A comparison between properly organised general anæsthesia on the one hand and spinal analgesia on the other seems to me to leave no doubt whatever as to which is the more humane—the more æsthetic process. The great advances that have taken place in general anæsthesia in this country during the past 20 or 30 years clearly indicate that it is in developing and elaborating the principles of that form of anæsthesia that our energies should be concentrated.

My second proposition is that by attention to certain comparatively minor details the passage of patients into and out of the state of unconsciousness may, in the vast majority of cases, be deprived of all mental and physical distress. I will not go so far as to say that it is possible to give every patient the pleasurable experiences which a late distinguished novelist and poet—a patient of mine—described as "the beatitudes of insensibility"; but I am convinced that many, and perhaps most, of the discomforts which one often hears attributed to general anæsthetics should in reality be attributed to a want of appreciation of certain details to which I shall to-day refer. I do not propose to deal at any length with the technical principles of anæsthetisation—the selection of appropriate anæsthetics, the adjustment of gas or vapour percentages to meet the special requirements of each case, the avoidance of the slightest auto-asphyxial

condition, &c. These principles, although undoubtedly contributory to the patient's comfort, particularly after anæsthetisation, are more especially intended to provide for his safety. I am to-day concerned with those details which collectively make for mental tranquillity and comfort during and after the administration of general anæsthetics.

One of the first duties of the anæsthetist is to treat all patients, whether they be of the sensitive or of the phlegmatic type, whether they be of the amenable or of the cross-grained class, with the utmost consideration, kindness, and tact. Discourtesy on the part of a patient—nay, even actual rudeness—may be but the expression of an overwrought nervous system. Whenever possible it is a distinct advantage to see patients and to examine them before the time appointed for the operation. This is particularly the case when a patient is exceedingly apprehensive with regard to the anæsthetic, or when there is some grave respiratory, circulatory, or other condition which may complicate the anæsthesia. It is practically impossible to obtain a correct estimate of the patient's condition and of the best method of procedure when one sees him for the first time lying upon the operating table surrounded by surgeons and nurses prepared and waiting for their respective duties. By seeing a patient a day or two beforehand the important question of the diet can be settled and final injunctions issued against the reprehensible but prevalent practice of giving the patient tea, beef tea, &c., three hours before the operation. The question of the preliminary use of morphine and atropine can also be considered. During the past two years I have used these drugs (generally ¼ grain of morphine and 1-120th grain of atropine 20 to 30 minutes before the anæsthetic) with great advantage, particularly in abdominal cases. The indifferent and rather sleepy condition brought about by the morphine is a great boon to apprehensive patients; abdominal relaxation may generally be secured, even in muscular men, with less anæsthetic than usual; the secretion of mucus during anæsthesia is almost wholly prevented, and the patient passes through the first portion of the otherwise painful post-operative period in comfort. I am still undecided as to whether the preliminary use of these drugs increases or diminishes post-anæsthetic vomiting. For operations before 10 or 10.30 A.M. absolutely nothing should be given after a light dinner the evening before. There should be both a nominal and an actual hour appointed for the operation so as to spare the patient as much suspense as possible. Thus, if it be intended to commence the *anæsthetic* at 9 A.M. the patient should be told what will in all probability prove to be the fact—namely, that the *operation* is to be at 9.30. By this venial deception he will be spared nearly half an hour's anticipation. Unpunctuality generally spells want of consideration, and, save in the most exceptional circumstances, is unpardonable. The anæsthetist should invariably be in attendance a quarter of an hour before the hour fixed in order to make the acquaintance of his patient, prepare the necessary apparatus out of sight of the patient, and wash, or otherwise prepare, his hands.

It is to be regretted that in their laudable desire to conform to the ever-increasing demands of aseptic principles many surgeons altogether lose sight of the disquieting effects which their methods of applying those principles may have upon patients, and particularly upon nervous patients. I have on numerous occasions seen sensitive and apprehensive subjects about to undergo formidable operations absolutely appalled at the sight presented to them on entering a well-equipped operating theatre, with its blaze of electric light, its complicated and comfortless operating table, its suggestive foot-baths beneath the table, its equally suggestive red tiled floor, its hissing sterilisers, its trays of glistening instruments, and its small army of surgeons, assistants, and nurses, all masked, gloved, and gowned in accordance with the latest dictates of science. I do not for one moment desire to belittle the precautions and preparations of the modern surgeon. My point is that it is unnecessary—I had almost said barbarous—to bring those precautions and preparations prominently before patients about to undergo operations. When the operation is to take place in a theatre the most considerate plan is to anæsthetise the patient in an adjacent room, preferably upon the operating table itself, disguised as far as possible with sheets and blankets, and when anæsthesia has been secured, to wheel the patient into the theatre where everything has been prepared. I would venture to assert that every operating theatre should have its anæsthetising room. If it be necessary to anæsthetise the patient in the theatre itself everything likely to engender alarm should if possible be screened off or covered up and the surgeon and his assistants, if enveloped in their operating gowns and masks, should be out of sight. In private houses and in nursing homes possessing no theatre the patient's bedroom is generally chosen for the operation. Under such circumstances he should, during the necessary preparations, either remain in some other room or his bed should be screened off. It is sometimes a good plan, particularly when dealing with a highly nervous subject, to anæsthetise him in his bed whilst the surgeon and his assistants are quietly making their preparations in an adjoining room. Directly consciousness has been destroyed the various surgical appliances are brought in and the patient is carefully transferred from his bed to the operating table. The contrast between this considerate plan and the others which I have indicated is sufficiently obvious to render further remarks unnecessary.

It is generally left to the anæsthetist to place patients in position for the administration of anæsthetics. Speaking generally, every endeavour should be made to meet the patient's particular wishes as regards the initial posture, so that he may feel as comfortable as possible during the inhalation period. There is no reason whatever why the operating table should not be furnished, at all events during the induction period, with comfortable pillows, a soft mattress, and well-warmed sheets and blankets. A plentiful supply of pillows should always be in readiness. I once had to anæsthetise a very fussy patient who always required 19 pillows of various sizes adjusted in certain definite positions before she could compose herself for natural sleep, and it was necessary to go through the process of adjusting each pillow in its particular position before she would submit to artificial sleep. As the patient lies down upon the operating table he should be covered with previously warmed blankets. When the lithotomy posture is contemplated the strap of Clover's crutch should be placed out of sight under the pillow and the patient anæsthetised lying upon two draw-sheets. By sliding the upper sheet over the lower the whole body with the pillow and strap may with the greatest ease be moved towards the end of the table and the desired posture secured without any of that jolting which so often disturbs respiration and hence the smoothness of anæsthesia. Care should be taken in adjusting leg straps in rectal and gynæcological surgery lest nerves or brittle vessels be damaged. Curiously enough, there are still some nurses who seem to think it necessary to provide unfortunate patients about to be operated upon with the hardest of operating tables, covered with the coldest of mackintoshes, and furnished with the thinnest and most uncomfortable of pillows. To place a cold mackintosh for a patient to lie upon is to be guilty of a surgical misdemeanour. This brings me to the important subject of preserving the bodily heat during and after operations under general anæsthetics. All unnecessary cutaneous exposure should rigidly be avoided. Feeble subjects and children should previously be encased in extemporised garments of cotton wool. If a hot water bed be used the temperature of the water should be only just above blood heat. In all cases the operating table should be well warmed by hot water bottles before the patient lies upon it, and great care should be taken to see that the bottles are then removed. I have heard of several instances of extensive burns resulting from a want of this precaution. During the operation the bed into which the patient will subsequently be moved should also thoroughly be warmed and covered with a full complement of clothes till the very second that he is transferred from the table to the bed. The curious custom of exposing one-half of the bed throughout the operation still obtains. Immediately the operation is over the patient should be placed in the warmed bed and the hot-water bottles removed. The importance of this last-named point cannot be over-estimated. I have, in my experience, heard of at least a hundred cases of more or less serious burns due to inattention to this point. The rule that should be followed is that under no circumstances should a hot-water bottle be placed in bed with an unconscious patient. Although the anæsthetist may incur the displeasure of the nurse he should, I think, always make a point, before he leaves his patient, of searching for and removing all hot-water bottles.

During the induction of anæsthesia all talking, turning on

of taps, clinking of instruments, clattering of basins, and banging of doors should studiously be avoided. Laughter, story-telling, and irrelevant talk, just as the patient is becoming unconscious are particularly indicative of that want of consideration for the feelings of others which is, I regret to say, one of the characteristics of modern life. I know of a case in which, just as a patient was losing consciousness, prior to the removal of an eye, and whilst he was quite unable to make any movement, he heard the words, "Which eye is it?" Many years ago in my own practice a patient, to whom I administered an anæsthetic, told me after the operation that during the induction period he heard a conversation at the other end of the room, and that although it was in reality being carried on in a whisper it sounded very loud to him and constituted a most distressing experience. Then I need hardly point out to you how important it is to administer the anæsthetic gently, and, as far as possible, in accordance with any special wishes the patient may have expressed. There is no anæsthetic comparable to nitrous oxide for quickly and pleasantly inducing anæsthesia, but in order that it may do itself justice four essential points must be borne in mind—viz.: (1) the apparatus employed should have wide channels and easily acting valves, which, by the way, should be examined before use; (2) the face-piece should be very accurately adjusted; (3) oral and not nasal breathing should be secured; and (4) air should be breathed through the valves of the apparatus before nitrous oxide is admitted. When a slow method of induction is thought preferable the patient should be encouraged to converse whilst the anæsthetic vapour is very gradually administered.

In addition to our attempting to make the passage into and out of anæsthesia as pleasant as possible for the patient we should not forget to extend our consideration to the relatives. These, indeed, are often much more apprehensive with regard to the anæsthetic than the patient himself. Whenever practicable relatives should remain in some other part of the house during an operation under a general anæsthetic, particularly if it be one requiring a light anæsthesia and therefore likely to be attended by unconscious reflex sounds. In any event the door of the operation room should be kept closed during the operation and the recovery period. Should a relative insist upon being present during the administration, that method should if possible be adopted which is least likely to distress an onlooker, and directly consciousness has been destroyed a signal should be given for the relative to withdraw. In the dental operations of private practice relatives frequently insist upon being present, and it is on such occasions that the anæsthesia of nitrous oxide and oxygen has such great advantages over that obtained by nitrous oxide itself. However safe the prolonged nasal method of administering nitrous oxide may be, it is certainly often very distressing to witness, and this fact, coupled with the further fact that it is occasionally uncertain or even impracticable, prevents me from recommending it to you.

Children require special care and consideration. The first essential is to gain their confidence; the second is never to deceive them; and the third is never to lose patience with them. Small children can often be induced to count aloud whilst chloroform or the C.E. mixture is being carefully dropped upon a Skinner's mask. Those over six or seven years of age like to be treated as if grown up. Whenever possible relatives should be altogether excluded from the room during anæsthetisation. They are liable, by the anxiety they display, to alarm the little patient, and if the latter should prove recalcitrant they are put to unnecessary distress. When a semi-anæsthetised child is to be carried from one room to another he should be placed in the lateral posture, and this maintained till the operating table is reached.

During the administration of an anæsthetic it is only fair to the patient that the anæsthetist should give his undivided attention to his patient. It is to be hoped that within the near future our legislature may restrict the use of anæsthetics to qualified persons and prohibit single-handed anæsthetising and operating, save in cases of emergency. To administer an anæsthetic as it should be administered, to give no stronger vapour than is needed for the procedure in hand, to maintain free and unobstructed breathing, to anticipate and appropriately treat surgical shock—these are the essential duties of the anæsthetist to his patient; and such duties can only be performed when the whole attention is given to the administration. There are, too, certain minor duties which must not be overlooked. Means must be adopted of preventing liquid anæsthetic from reaching the face; gags or props, if required, must be used with great caution, lest loose or defective teeth be damaged; and the position of the arms and legs must be such that no posture-paralysis follows the operation. Although, as I have previously said, I am not to-day referring at any length to technical principles and details, it would be difficult to consider the æsthetic possibilities of anæsthetising without referring to the importance of carefully adjusting the administration to the particular conditions present. In popular language this means that no more of the anæsthetic should be administered than is absolutely necessary to fulfil the special surgical requirements. There is, I think, evidence to show that the anæsthetist of to-day—and I here more particularly refer to the specialist—errs, if anything, on the side of unnecessarily deep anæsthesia. Certainly this is so when ether is employed. Now although, by securing deep anæsthesia, he is doubtless rendering great services to his surgeon, it is questionable whether he is thinking sufficiently of his patient. I am rather inclined to maintain that the ideal form of general anæsthesia is that which, though profound enough to satisfy the surgical requirements, is not so profound as prejudicially to affect the patient. The true test of what I may perhaps venture to call artistic anæsthetising is to be found in the rapidity with which the patient regains semi consciousness after the operation. If the anæsthetist has so educated his sense of touch that he is able to detect and to maintain, even for a lengthy administration, an almost indistinguishable degree of lid-closure when the cornea is lightly touched, this speedy recovery will take place. By such a fine adjustment of the art of anæsthetising, the patient will be spared much of the after discomfort which is often regarded as inseparable from general anæsthesia.

It is important to bear in mind that the duties of the anæsthetist do not terminate with the withdrawal of the anæsthetic. Many a life has been lost by inappreciation of this point. No patient should be left until the lid reflexes have briskly returned and the power of swallowing and coughing has been regained. Speaking generally the patient should be turned upon his side immediately after anæsthetisation. After operations for adenoids it is important to stimulate the fauces and induce vomiting. If this be not done, the presence of blood within the stomach may produce inhibitory cardiac effects which, though not really dangerous, may alarm those left in charge of the patient. This suggestion does not, of course, apply to operations performed under the transient and too often inadequate anæsthesia of ethyl chloride or nitrous oxide. Clearing the fauces of mucus and adjusting the patient's head so that all secretions gravitate from the mouth will greatly assist in recovery and in the prevention of post-anæsthetic vomiting. Another important point, particularly in the case of prolonged operations about the air-passages, and in the case of patients with any respiratory affection, is to change the posture from one side to the other every two hours during the first day and night after the operation. In this way each lung can freely expand, and the plugging of a main or secondary bronchus by blood or mucus, and hence subsequent broncho-pneumonia, may be avoided. In a case in which I had administered an anæsthetic for about two hours for an operation upon the septum nasi and in which a certain amount of blood had, to my knowledge, entered the bronchi, the nurse failed to carry out the instructions given her as to posture, and the patient was kept lying upon one side. At the end of 48 hours the temperature rose, and signs indicating incipient but local broncho-pneumonia were detected. Almost immediately after the patient had been turned upon his opposite side some altered blood was coughed up, the temperature fell, and the physical signs disappeared.

Many of you will doubtless criticise the remarks which I have made, and some of you, perhaps, will think that I have altogether failed to make out a case for the æsthetic practice of surgical anæsthesia. Possibly the time has hardly come for the recognition and widespread adoption of all the details I have discussed. I am fully prepared to admit that in busy general practices, and particularly in such practices amongst the poorer classes, it may be difficult or impossible to bring the art of anæsthetising up to the level I have indicated. But if I have convinced you that it is possible by attention to these details to mitigate the discomfort and distress which may

attend surgical anæsthesia I shall have achieved my object. In dealing with sensitive and, it may be, suffering human beings who are about to invoke the aid of the surgeon, it is the plain duty of the anæsthetist to prevent, as far as possible, not only physical but mental pain, and this double duty can only be discharged by attending to the various points which I have had the pleasure of placing before you.

The Milroy Lectures
ON
THE STREPTOTRICHOSES AND TUBERCULOSIS.

Delivered before the Royal College of Physicians of London on Feb. 17th, 22nd, and 24th, 1910,

BY ALEXANDER G. R. FOULERTON,
F.R.C.S. ENG., D.P.H. CAMB.,
LECTURER ON BACTERIOLOGY AND ON PUBLIC HEALTH TO THE MIDDLESEX HOSPITAL SCHOOL, AND COUNTY MEDICAL OFFICER OF HEALTH FOR EAST SUSSEX.

LECTURE II.[1]

Delivered on Feb. 22nd.

STREPTOTRICHEÆ PATHOGENIC FOR MAN.

MR. PRESIDENT AND FELLOWS,—It may be stated that, contrary to what was believed formerly, the ray fungus of Bollinger (*St. bovis communis*) is, relatively to other species, an uncommon cause of human infection. A few well authenticated instances of its occurrence in man have been recorded since the study of the streptotrichoses has been placed on an exact basis; but the records of others and our own investigations at the Middlesex Hospital suggest that this species is not, at any rate, a frequent cause of disease in man. In the course of our own investigation of 53 cases of streptotrichosis in man six distinct species of parasites have been identified. In one case it was easy to identify the streptothrix described by Eppinger; and from other cases we have isolated five distinct species which we have not been able to identify positively with previously described parasites. One of these five species, *St. luteola*, has sufficiently definite biological characteristics and does not correspond with any other named species. Of the remaining four organisms described provisionally as *St. hominis* I., II., III., and IV., Species III. and IV. are freely growing streptotricheæ, with well-marked biological characteristics, whilst Species I. and II. are organisms which yield a rather scanty growth on artificial media, but which, because of the scantiness of their growth, cannot be positively identified at present with apparently closely similar species isolated and described by others.

THE GENERAL BIOLOGICAL CHARACTERISTICS OF THE PATHOGENIC STREPTOTRICHEÆ.

Because of want of knowledge of many details necessary for the proper identification of some of the organisms which have been described by pathologists, any attempt to classify, or even roughly group, the pathogenic streptotricheæ is attended by some difficulty. I have, however, attempted to subdivide these parasites roughly in accordance with certain broad cultural characteristics.

The first group includes a number of species which grow freely under artificial conditions at temperatures between 20°C. and 37°C., and which conform generally to the cultural type of the first group of saprophytic species already referred to. In this group may be placed the original ray fungus of Bollinger (*St. bovis communis*) and the closely allied, or identical species described by Rivolta under the name of *Actinomyces bovis sulphureus* as infecting the ox, and by Affanassiew and others as occurring occasionally in cases of human infection. To this group also belong the three species which I have described as *St. luteola* and *St. hominis* III. and IV., together with certain freely growing species described by Garten, Hesse, and others. The general morphology of this group is typical of the genus, and no difficulty in identification of the nature of the parasites is likely to arise. Most of the species liquefy gelatin, some liquefy inspissated blood serum, and some exercise an active hydrolytic action on starch. Some of these species give off in growth a pronounced "mouldy" smell; with others a faint feculent smell is noticeable with broth cultures, as happens also with some members of the third group. Pigment formation is not uncommon; and sporulation is frequently accompanied by a somewhat coarse kind of efflorescence on the surface of the growth. It may be added that *St. hominis* III., isolated from three cases of appendicitis, and *St. hominis* IV., isolated from a case of renal streptotrichosis which was probably secondary to a lung infection, are freely growing organisms which liquefy gelatin and generally resemble *St. bovis communis*. The two species are readily distinguished from each other, however, in culture. Species III. yields a faintly yellowish growth on nutrient agar, a brownish growth on potato, and liquefies serum slowly. Species IV. yields a greyish, gradually darkening, growth on nutrient agar, a black growth on potato, and does not liquefy inspissated blood serum.

The second group includes species which in their cultural characteristics conform generally with the second type of saprophytic organisms. Some of these organisms yield on artificial media a somewhat heaped-up, mealy-looking growth which may resemble exactly the growth of Koch's bacillus. The group includes *St. nocardii*, *St. epiingeri*, *St. capræ*, the streptothrix described by Sabrazès and Rivière, and the two distinct species described by Vincent and Freer as the cause of madura foot in India and in the Philippine Islands respectively. All the above species have been examined in my laboratory. Vincent's *St. maduræ* apparently never shows any acid-fast properties; Freer's streptothrix is said to be an acid-fast species, but I have not yet succeeded in satisfying myself on this point; and all the remaining species develop acid-fast rod-segments in old cultures. The streptothrix of leprosy, which Deycke has recently isolated, is also strongly acid-fast both in cultures on artificial media and when under parasitic conditions. The cultural characters of an acid-fast streptothrix isolated by Scheele and Petruschky from the case of a woman, aged 56 years, who died with a pulmonary infection and numerous subcutaneous abscesses, have not been described fully, but it seems probable that the species belongs to this group. Morphology in this group is as clearly characteristic of the genus as it is with species of the former group; speaking generally, however, the mycelial threads are finer, and usually lateral branching is somewhat less frequent in this group than in the other. Sporulation does not cause the coarse or chalky efflorescence seen in the other group, but with spore formation the surface of the growth usually assumes a fine, dry, powdery appearance. Some of the species form pigment, but this property is rather variable. Most of the species yield good growth on potato, inspissated blood serum is not liquefied, and there is no marked smell from cultures on artificial media. The pathogenic action of species of this group is usually well marked for the guinea-pig and rabbit, resulting sometimes in an infection characterised by widely disseminated tuberculous lesions.

The third group includes a type of organism which appears to be common in human infections, and which was referred to earlier as the class of organism with regard to which difficulties in identification are likely to arise. The type is difficult of growth on artificial media, its pathogenic action for laboratory animals is usually uncertain and of low degree, and it is impossible to say how many distinct species it includes. Of all the ordinary culture media peptone broth seems the best suited for the growth of these parasites; growth appears between the third and seventh days of incubation at a temperature of 37° C., and is represented either by a filmy-looking mass of very small white colonies at the bottom of the broth or by small isolated colonies which adhere to the side of the tube in which they are growing, the organism in the latter case sometimes showing a curious preference for growth up one side of the tube. In one or two instances a faint feculent smell has been detected in broth cultures of these organisms, whilst pus containing the organism in pure culture has had a strong smell of the same kind. These colonies, which never attain to a size larger than that of a small pin-head, show on examination a typical streptothrix organism. In some cases growth is not to be obtained on any other artificial medium. Growth

[1] Lecture I. was published in THE LANCET of Feb. 26th, p. 551.

on nutrient agar, when it occurs, is very slow; small, whitish, dry-looking, heaped-up colonies, of a friable consistence, appear on the medium after about five to eight days' incubation at 37° C., and remain always of limited extent. On examination of these colonies the growth appears to consist almost exclusively of beaded, rod-segments, and careful search may be required for the detection of definite lateral branching. When growth occurs on nutrient agar it usually occurs also on inspissated horse or ox serum, and in that case is slow in progress and always scanty. After a time there is some "pitting" of the serum on which the small whitish colonies are implanted, suggestive of a feeble peptonising action. Growth does not usually occur on nutrient gelatin incubated at 22° C.; but, in spite of no growth occurring, some liquefaction has been observed at times of the gelatin surface over which pus containing organisms of this type has been smeared—an indication of the secretion of a peptonising ferment by the parasite. From cases in which growth has been obtained on at least three different media—peptone broth, nutrient agar, and inspissated serum—I have been able to isolate what are believed to be two distinct species of this type, *St. hominis* I. and II. Streptothrix I., isolated from two cases of pulmonary streptotrichosis and from four cases of infection of parts about the mouth and neck, yields a very scanty, whitish, friable growth on solid media, which much resembles, except that it is scanty in comparison, the growth of Koch's bacillus. This species has a low degree of pathogenicity for ordinary laboratory animals, inoculation tests, either with the original pus or with pure cultures, usually failing. Streptothrix II., isolated from a single case of acute abscess of the tongue, yields a whitish growth of similar appearance, but developing with rather more freedom. In broth cultures of this organism "clubbing" of the ends of the mycelial side branches is common and the entire tufts of mycelium are liable to become encrusted with a hard, gritty, calcareous kind of material. The second of these species is actively pathogenic for the guinea-pig and rabbit, causing on intraperitoneal injection a fatal peritonitis. In neither species has any development of acid-fast rod-segments been observed.

From one other case of pulmonary streptotrichosis, and from five cases of infection of parts about the mouth or in the neck, small whitish colonies of a fine streptothrix organism, so far resembling Species I. and II., were obtained in broth cultures, but attempts to obtain cultures on solid media failed.

Streptotrichoses caused by parasites conforming more or less closely with the special type of this group have been described by several pathologists; in none of the cases has the presence of acid-fast rod-segments been observed. The following may be quoted as cases in which a full description of the parasite isolated in culture is available. Three cases recorded by Berestnew—one a case of subperiosteal abscess of the mandible in a woman and two cases of pulmonary streptotrichosis occurring in males, aged 16 and 43 years respectively, and in each case with perforation of the thorax and infection of the skin and the chest wall: a case of abscess of the mandible recorded by Paul Krause: two cases of what was termed "necrotic broncho-pneumonia" occurring in men aged 23 and 45 years respectively, recorded by Norris and Larkin: and a case of abscess of the abdominal wall, possibly secondary to an appendicitis, recorded by Hayo Bruns. The organism (*St. equi*) which Dean isolated from a submaxillary abscess in a horse appears, from the description given, to be one which would come within this group; intraperitoneal injection of this organism produced in rabbits a definite tuberculous infection of the peritoneum.

THE GENERAL PATHOLOGY OF THE STREPTOTRICHOSES.

It will be convenient to consider the general pathology of the streptotrichoses in connexion with a series of 53 cases from which material has been examined in my laboratories, the series including 39 cases which have been referred to previously in an article on the Pathology of Streptothrix Infections in Allbutt and Rolleston's "System of Medicine." The series does not include any cases which would generally be recognised as cases of tuberculosis, and in every case a diagnosis has been established either by isolation and culture of the parasite or by the identification microscopically of definite branching mycelial masses or threads of a declared streptothrix type and staining by Gram's method.

Table showing Sex Distribution, Apparent Seat of Primary Infection, and Results of Bacteriological Examination in 53 Cases of Streptotrichosis.

—	Total.	Sex distribution.		Results of bacteriological examination of 43 cases.											Streptothrix identified by microscopic examination only; neither culture nor animal experiments attempted (10 cases).
		M.	F.	Streptothrix eppingeri.	Streptothrix luteola.	Streptothrix hominis I.	Streptothrix hominis II.	Streptothrix hominis III.	Streptothrix hominis IV.	Freely growing streptothrix. ? Species IV.	Culture of organism obtained in broth only. Failure with other media.	Attempt at culture failed; animal inoculation, positive result.	Attempt at culture failed; animal inoculation, if any, no result.	Culture not attempted; animal inoculation, with negative result.	
Streptotrichosis of parts about the mouth and neck	27	17	10	—	1	4	1	—	—	1	5	—	8	—	7
Pulmonary streptotrichosis	9	5	4	—	—	2	—	—	—	—	1	1	3	1	1
Renal streptotrichosis, probably secondary to pulmonary infection	1	—	1	—	—	—	—	—	1	—	—	—	—	—	—
Appendicitis	10	7	3	—	—	—	—	2	—	—	—	—	6	—	2
Right iliac abscess, probably secondary to appendicitis	4	2	2	—	—	—	—	1	—	—	—	—	3	—	—
Conjunctivitis	1	—	1	—	1	—	—	—	—	—	—	—	—	—	—
Peritonitis, after abdominal operation	1	1	—	1	—	—	—	—	—	—	—	—	—	—	—
	53	32	21	1	2	6	1	3	1	1	6	1	20	1	10

Of the 53 patients, 48 of whom were of the ordinary hospital class and 5 private patients, 32 were male and 21 female. This preponderance of males corresponds with what has been found in larger series of collected cases. Thus amongst 101 cases in which the sex was known, out of 109 cases published in the United Kingdom from 1884 to 1906 and collected by Acland, there were 65 males and 36 females; and amongst 405 cases, collected by Leith, in which the sex was known there were 295 males and 110 females.

The influence of occupation and other circumstances involving special exposure to the possibility of infection from a vegetable source is noticeable in this series. In 10 (8 males and 2 females) of the 53 cases the occupation was

not ascertained; of the remaining 43 persons, 14 (4 males and 10 females) either had no special occupation or were engaged in ordinary housework, and 29 belonged to the "occupied" classes; of these 29, 2 (a medical man and a woman student of medicine) belonged to the professional classes, and 27 (19 males and 8 females) following definite trades belonged to the working classes.

Of the 27 persons belonging to the working classes 19 (13 males and 6 females) followed trades in which they would be specially exposed to any infection which might have its source of origin in vegetable matter. Thus there were amongst them 5 men employed in stable work and handling hay and straw constantly; of these, 1 had a primary pulmonary streptotrichosis and died with a secondary abscess in the cerebrum, another was admitted into hospital with a streptotrichial empyema secondary to a lung infection, 2 had abscesses in the submaxillary region, and 1 had an abscess in the substance of the cheek. A patient with a streptotrichial appendicitis was a cellarman who was constantly handling the straw casings of wine bottles, and who happened also to live over some stables. Two of the patients were bakers, one with a subperiostea labscess of the lower jaw, and one with a right iliac abscess which presumably was secondary to an appendicitis. Two of the patients were gardeners, both with abscesses in the submaxillary region. Two other patients whose occupations would expose them to the risk of infection of this kind were a dairymaid, who suffered from a submaxillary abscess, and a man with a streptotrichial appendicitis who had been employed for many years in a large timber yard.

Finally, amongst these 19 workers, who by reason of their occupation, might be supposed to be specially liable to infection of this kind, there was a group of 7, including 2 working tailors, 3 working tailoresses, and 2 working dressmakers, who would be in the habit of passing cotton and thread between their lips. Of these the two tailors each had a submaxillary abscess; the three tailoresses suffered respectively from a pulmonary streptotrichosis, an acute parotid abscess, and a submaxillary abscess; one dressmaker died with thrombosis of the superior mesenteric, splenic, and portal veins resulting from a streptotrichial appendicitis, and the other had a submaxillary abscess. The remaining 8 of the working classes (6 males and 2 females) followed as many different trades, in none of which could any probable cause of any special liability to exposure to infection be traced. In two other cases—one that of a woman medical student who died with extensive retroperitoneal suppuration following on a streptotrichial appendicitis, the second that of a young male of no special occupation who died with infection of the lungs, liver, and cerebrum—there were circumstances of interest in connexion with the probable source of infection. The woman had spent a long holiday in the country ending three months before the onset of symptoms of appendicitis, and whilst away had been in the frequent habit of chewing ears of growing barley and oats as she walked through the fields. The male patient died within four months of leaving a farm on which he had spent several weeks during convalescence after scarlet fever.

The age-distribution of the cases showed that the incidence of infection is probably heaviest at ages between 15 and 35 years:—

Infection occurred in	3	cases at ages	under 15 years.				
,,	,,	15	,,	,,	15 and under	25	years.
,,	,,	14	,,	,,	25 ,,	35	,,
,,	,,	5	,,	,,	35 ,,	45	,,
,,	,,	8	,,	,,	45 ,,	55	,,
,,	,,	3	,,	,,	55 and upwards.		

In five adult cases the exact age was not ascertained.

In 10 (7 of infection of parts about the mouth, 2 of appendicitis, and 1 of pulmonary streptotrichosis) of the 53 cases the parasite was identified by microscopic examination only, and no attempts at culture or animal inoculations were made; and in another case, one of pulmonary streptotrichosis, the parasite was identified microscopically, no culture was attempted, and animal inoculation gave no result.

The results of bacteriological examination in the remaining 42 cases were as follows: *St. eppingeri* was isolated in pure culture from a case of peritonitis resulting from accidental infection during an abdominal operation. *St. luteola* was isolated from a case of alveolar abscess of the maxilla, and from a case of conjunctivitis. *St. hominis* I. was isolated from 4 cases of infection of parts about the mouth, and from 2 cases of pulmonary streptotrichosis. *St. hominis* II. was isolated from a case of acute abscess of the tongue. *St. hominis* III. was isolated from 2 cases of appendicitis, and from the pus of a right iliac abscess, probably resulting from appendicitis. *St. hominis* IV. was isolated from a case of renal streptotrichosis which was probably secondary to a pulmonary infection; a streptothrix whose exact character has not yet been worked out, but which closely resembles Streptothrix IV., was isolated from an abscess in the cheek.

In 6 other cases (5 of infection of parts about the mouth and 1 of pulmonary streptotrichosis) a growth of small white colonies resembling those of *St. hominis* I. and II., was obtained in peptone broth; but no growth could be obtained on solid media, and animal inoculations, when carried out, gave negative results. In another case, one of pulmonary streptotrichosis, attempts at culture of the parasite which had been identified microscopically failed, but inoculation of the sputum from the case produced, on intraperitoneal inoculation of rabbits, a fatal tuberculous kind of peritonitis in the lesions of which the streptothrix was present in large quantities.

In the remaining 20 cases (8 of infection of parts about the mouth and in the neck, 3 of pulmonary streptotrichosis, 6 of appendicitis, and 3 of right iliac abscess) attempts at culture of the parasite failed, and no result was obtained in such of these cases in which inoculation of rabbits and guinea-pigs was performed. The complete failure of 20 attempts out of 42 which were made to identify by ordinary bacteriological procedure a streptothrix whose presence had been proved by microscopic examination will indicate the difficulties presenting themselves in the exact study of these parasites. That the streptothrix which was identified by microscopic examination was the primary cause of the lesions in these cases is indicated by the fact that in 13 out of these 20 cases the solid and fluid culture media which had been inoculated remained sterile of growth; in the seven other cases cultures of either *Staphylococcus pyogenes aureus* or *albus* were obtained, these bacteria being present as the result presumably of secondary infection.

The nature of the lesions occurring in the series of cases may be considered next.

Infection by the Oral Mucous Membrane.

Amongst the 53 cases there were 27 in which lesions about the mouth or in the neck resulted clearly from oral infection.

In 22 of these cases the lesion was a single localised abscess. In 10 cases the abscess was certainly alveolar, and in 9 of the cases affected the lower jaw. In only 2 of these cases was the species of the parasite identified, *St. luteola* being isolated in the maxillary case, and *St. hominis* I. in one of the others. In 10 additional cases there was an abscess either in the substance of the cheek or presenting externally behind or below the lower jaw. Amongst these 10 cases *St. hominis* I. was isolated from one, and a free-growing organism closely resembling, or identical with, *St. hominis* IV. from another. There was one case of acute suppuration of the parotid gland in which a streptothrix was present in large quantities in pus exuding from Stenson's duct; the organism was obtained in pure culture in peptone broth, but no growth could be obtained on other media. A single case of acute abscess of the tongue occurred. The patient, a stonemason, aged 18 years, had been under an operation for a traumatic hæmatocele of the spermatic cord. He had recovered and was on the point of being discharged from the hospital when an abscess, rather smaller than a hazel nut, developed in the dorsum of the tongue. The pus contained *St. hominis* II. in pure culture.

In the five remaining cases the infection had spread locally to some extent. In one case, that of a man, aged 21 years, there was a history of an acute tonsillitis followed by an abscess near the angle of the jaw. Induration of the front and side of the neck followed, in the course of which some five or six small abscesses formed in the subcutaneous tissue. On admission into hospital the infection had extended to the level of the upper border of the sternum, and the pus from a small sinus contained large quantities of a streptothrix which, as subsequently obtained in pure culture from another abscess, proved to be *St. hominis* I. In the

FIG. 1.

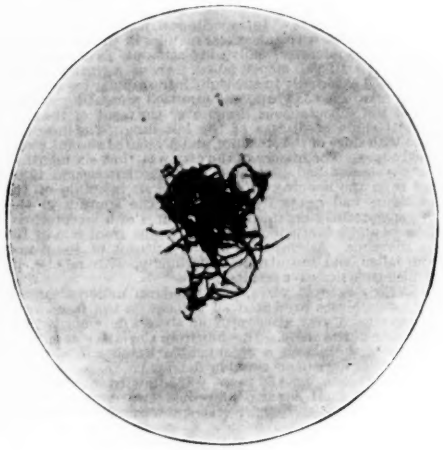

FIG. 2.

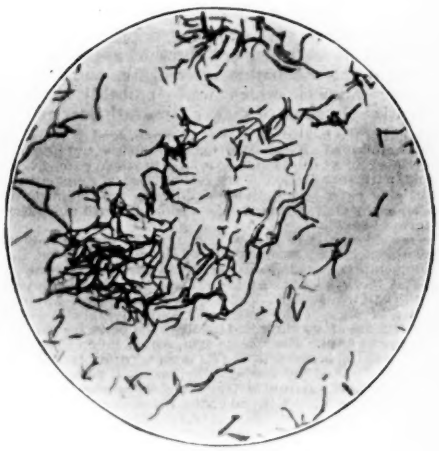

FIG. 3.

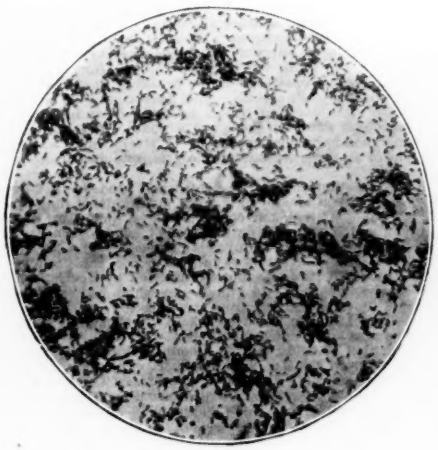

FIG. 4.

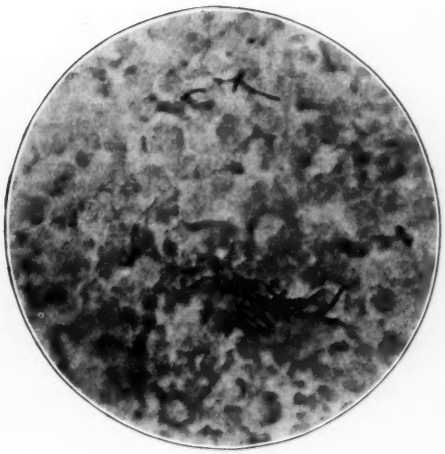

FIG. 5.

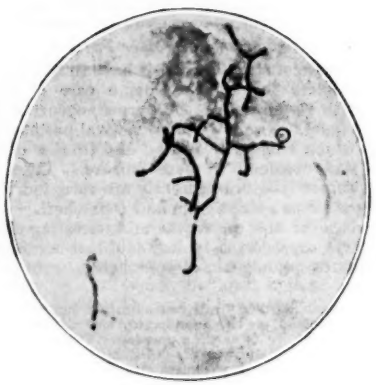

FIG. 1.—48 hours old culture of *Streptothrix eppingeri*, showing branching mycelium.

FIG. 2.—96 hours old culture of *Streptothrix eppingeri*, showing fragmentation of mycelium.

FIG. 3.—Old culture of *Streptothrix eppingeri*, showing rod-segments (some acid-fast) and spherical spores.

FIG. 4.—*Streptothrix freeri*, from peritoneal exudation of rabbit dying three days after intra-peritoneal inoculation.

FIG. 5.—Acid-fast streptothrix in sputum, from case of pulmonary infection. (Dr. Ward's case.)

other four cases an abscess either in the cheek or in the floor of the mouth had perforated and infected the skin and subcutaneous tissue to greater or less extent; *St. hominis* I. was isolated in one of these cases also.

Infection of the Appendix Cæci.

The next common seat of apparent primary infection was the appendix, there being ten cases of appendicitis proved by operation or examination after death, and four cases of right iliac abscess which were probably secondary to appendicitis. In three of these cases death occurred.

In the first of the fatal cases, that of a woman, aged 26 years, extensive suppuration followed an operation for appendicitis, and death occurred six months later. At the examination after death an extensive infection was found, with suppuration of the retroperitoneal connective tissue of the right side extending upwards as high as the origin of the psoas muscle, and spreading downwards for a short distance along the sheath of the femoral vessels.

In the second case, that of a woman, aged 25 years, a sudden rise of temperature to 104° F., accompanied by rigors, occurred on the tenth day after operation, jaundice was noticed on the following day, and the patient died 16 days later. At the examination after death peritonitis of recent origin was found. There were enlargement, softening, and suppuration of some of the aortic and cœliac lymphatic glands. An abscess of the size of a walnut had involved the posterior aspect of the pancreas near its head. The splenic vein, which lay in close relation to the abscess, and the portal vein and its intra-hepatic branches were full of thick green pus, and there were numerous small nodules in the liver. The pus in the veins was full of branching mycelium, and *St. hominis* III. was isolated from the veins and from the liver nodules.

The third case was that of a boy, aged 16 years, who was operated on for appendicitis, the symptoms of which had developed acutely seven days previously. There was a sudden rise of temperature on the day after the operation, and the temperature fluctuated between normal and 104° F. until death occurred seven weeks later. Symptoms of pneumonia, and then peritonitis, developed shortly before death. At the examination after death there were found recent lobular pneumonia, peritonitis, suppurative thrombosis of the portal vein, numerous abscesses in the right lobe of the liver, and a single nodule in the spleen. The presence of a streptothrix parasite was clearly apparent in the appendix at the time of operation and in the pus of the portal vein after death. But all attempts to obtain the organism in culture failed.

There is little to be said with regard to the remaining 11 cases. In none of them was the appendicitis of acute onset, and recovery from operation occurred in all. In two of the cases the appendix had become adherent to the abdominal wall and infection by direct continuity of tissue had followed, a small abscess in the skin presenting in one case just above Poupart's ligament, in the other case at the upper part of Scarpa's triangle. In two of these cases *St. hominis* III. was isolated, in seven the attempt at culture failed, and in two the parasite was proved to be present by microscopic examination only. It may be mentioned that a distinct feculent odour was noticeable with the pus of three of the cases, although the negative results of attempts at culture showed that no organisms other than the streptothrix which had been identified microscopically were present.

Primary Pulmonary Streptotrichosis.

Amongst the 53 cases of streptotrichosis there were ten in which, as it appeared, the lung was the seat of primary infection. In nine of the cases the existence of the lung infection was established completely; in the other case it appeared that a streptotrichosis of the kidney was secondary to lung disease, the exact nature of which could not be proved. These pulmonary cases are of sufficient importance to be referred to in some detail.

CASE 1.—A woman, aged 19 years and of healthy appearance, was admitted with an abscess presenting in the upper left mammary region. The pus had a distinctly feculent smell, and *St. hominis* I. was isolated from it in pure culture. As the result of the examination it appeared probable that the abscess was secondary to deeper-seated disease, and, the original operation wound not healing, an exploratory operation showed a small fistula perforating the third intercostal space. There were no symptoms of intrathoracic disease, but physical examination proved a small area of impaired lung resonance below the position of the mammary abscess, together with deficient expansion of the lung. The case recovered after further operative measures and long treatment with potassium iodide.

CASE 2.—A coachman, aged 50 years, was admitted with a large empyema of the right pleura. The pus, as in the last case, had a distinct feculent odour, and on microscopical examination proved to contain large quantities of a streptothrix. Three dozen tubes of various culture media were inoculated with the pus, but all remained sterile. Inoculation of rabbits and guinea-pigs also gave negative results. The patient was much emaciated on admission and there was a history of chest disease of several years' standing.

CASE 3.—A Polish working tailoress, aged 46 years, was admitted with a history of lung disease of some 12 years' duration. There were marked physical signs in both lungs, and the sputum showed quantities of a streptothrix. A year before admission into hospital an abscess had formed, and broken, just under the left clavicle. At the time of admission there was a considerable discoloured area of brawny induration of the subcutaneous tissue extending above and below the left clavicle. The patient remained in hospital for some four months, during which time infection of the subcutaneous tissue of the chest gradually extended until the left suprascapular region behind and the whole of the mammary region in front were involved. Numerous small subcutaneous abscesses formed, and from the pus of these *St. hominis* I. was isolated in pure culture repeatedly.

CASE 4.—A woman, aged about 45 years, had for many years signs and symptoms suggestive of chronic phthisis of the right lung. Her sputum contained large quantities of a streptothrix parasite, and no acid-fast organisms could be found. Inoculation of the sputum into the popliteal space of the guinea-pig gave a negative result, proving the absence of Koch's bacillus. Intraperitoneal inoculation of the rabbit produced a peritonitis, with tubercular nodules in which a streptothrix could be recognised microscopically; but attempts to obtain cultures of the parasite on artificial media failed. About a year afterwards an abscess presented externally in the right infrascapular region.

CASE 5.—A man, aged 33 years, was admitted presenting an extensive induration of the subcutaneous tissue over the front of the chest and with physical signs of disease of the left lung. The indurated area extended to both sides of the sternum, and presented several ulcers with undermined edges. The history of the case was that six months before admission an abscess had presented over the left second intercostal space, and from the opening of the abscess an infection of the subcutaneous tissue had gradually extended. The sputum in this case contained a streptothrix organism, and cultures of a streptothrix were obtained in peptone broth inoculated with pus from one of the subcutaneous abscesses. Attempts to obtain cultures of the parasite on solid media failed, and inoculation experiments with rabbits, guinea-pigs, and mice gave negative results.

CASE 6.—A girl, aged 13 years, who had been under treatment for pulmonary tuberculosis, presented an abscess on the front of the left side of the chest. A year afterwards an abscess developed at the back of the right side of the chest. The pus from the latter abscess showed on microscopic examination a considerable number of streptothrix parasites; no other organisms could be detected.

CASE 7.—A coachman, aged 65 years, was admitted into hospital with symptoms of a cerebral abscess, and died two days later. At the examination after death an extensive streptotrichosis of the right lung and a cerebral abscess were found. A streptothrix was identified microscopically in the lung and in the pus of the cerebral abscess, but attempts at culture on artificial media failed.

CASE 8.—A lad, aged 18 years, was admitted into hospital with an old empyema of the left pleura which was discharging through two fistulæ in the chest wall. The history of the case was that three months previously there had been an attack of "inflammation of the lungs," that an empyema had then developed, and had been incised when it was already pointing. On the sixth day after admission the patient had 15 fits of an epileptic kind, and then became comatose. He remained unconscious for another six days, during which numerous epileptiform convulsions occurred. He then died. At the examination after death an extensive streptotrichosis with infection of the left lung, the spleen, liver, and brain was found. The left lung presented large nodular masses, some caseated, others breaking down into pus. The spleen contained a large abscess. The liver contained a number of small nodules, some caseated, others breaking down into pus. In the right frontal lobe of the brain there was a nodule, of about the size of a walnut, which had partly broken down. A streptothrix was identified in the lesions of all these organs, but no attempts at culture of it were made.

CASE 9.—The patient, a male metal-worker, aged about 50 years, had wasted considerably after suffering from symptoms of lung disease for about 12 months. His sputum contained large quantities of acid-fast rods, many of which were distinctly "beaded," and together with these there were longer, branched, mycelial threads. The organism was strongly acid-fast. No attempts at culture of the parasite on artificial media were made in this case, but an infection by Koch's bacillus was excluded by the fact that two guinea-pigs which had been inoculated with the sputum remained free from any infection.

CASE 10.—The last case to be mentioned is that of a woman, aged 31 years, who was admitted into hospital with a pyo-nephrosis. The case was regarded as being one of tubercular infection, and the right kidney was removed by Mr. T. H. Kellock. On examination, immediately after removal, the gland had an appearance which would usually be regarded as characteristic of tuberculosis. It was considerably enlarged, its substance had been extensively destroyed, and what remained presented a number of caseating nodular deposits. The much dilated pelvis contained a quantity of thick, curdy pus. Microscopic examination of the caseous nodules showed a streptothrix parasite present in large quantity; and *St. hominis* IV. was isolated in pure culture. Two guinea-pigs which were inoculated with the caseous material remained free from any indication of tubercular infection. It seemed probable that the original infection was a pulmonary one; there was a history of chest disease before signs of kidney disease were observed, and although there were no signs of lung disease detected during the patient's stay in hospital it was ascertained that there was a recrudescence of lung symptoms some months after she left.

Streptotrichosis of other Parts.

Two other cases of streptotrichosis have to be mentioned in order to complete the series. One, a case of acute conjunctivitis with sloughing of the cornea, occurred in a girl, aged eight years. From the conjunctival pus an organism, *St. luteola*, which had been isolated also from a case of oral infection, was obtained in pure culture. Cases of conjunctival streptotrichosis apparently are rare, but have been recorded by Du Bois Saint-Sévrin and Demicheri.

The last case of the series was an interesting example of infection by *St. eppingeri*, a typical acid-fast organism of the second group of pathogenic streptotricheæ referred to in these lectures.

The patient, a man, aged 55 years, was admitted into hospital with a diagnosis of carcinoma of the œsophagus, and an appendicostomy operation was performed for feeding purposes. The patient, however, become gradually weaker and weaker, and died 24 days after the operation. Beyond the increasing weakness after the operation there were no special symptoms of disease, and the temperature never rose above 99·2° F. At the examination after death a narrow, annular, carcinomatous stricture of the œsophagus was found at the level of the upper border of the thyroid cartilage; there were no secondary foci of malignant disease. The cæcum and its appendix were quite healthy,

but on the peritoneal surface in the neighbourhood there were a number of yellowish-grey miliary tubercles. Behind the cæcum there was an abscess of about the size of a hen's egg. Small greyish tubercles were scattered thickly through the retro-peritoneal tissue behind the ascending colon; there were a few also on the under surface of the right half of the diaphragm. There was some general peritonitis, and a few grey miliary tubercles were found on the intestines. The right lung contained three abscesses; there was an abscess of about the size of a walnut in the base of the lung at a point at which the lung was adherent to the diaphragm, there was a smaller abscess on the middle lobe, and a third one in the apex of the lung. Nothing abnormal was found in the left lung or in the other organs. *St. eppingeri* was isolated in pure culture from the pus of the retro-cæcal abscess, from a small tubercle in the connective tissue behind the ascending colon, and from the pus of the pulmonary abscesses.

It appeared clearly that the streptotrichosis was the result of an accidental infection during the performance of the operation, and there is a close parallelism between the history and that of a case recorded by MacCallum, in which infection of the peritoneal sac by *St. eppingeri* occurred during an operation of gastrostomy.

Excluding the two cases—one of pulmonary, the other of peritoneal infection—in which an acid-fast streptothrix was present, the series includes 51 cases in which the infecting parasite was either probably or certainly a species of the first or third group of pathogenic streptotricheæ which have been referred to. It is true that in 10 of the cases neither culture experiments nor animal inoculations were attempted, and that in 21 other cases attempts at isolating the streptothrix which was present resulted in failure. But acid-fast organisms were carefully looked for, and since streptotricheæ of the first and second groups grow with comparative freedom on artificial media it is permissible to presume their absence in the negative cases, and to assume that the infecting organism was in all probability some species of the third group. The 51 cases of streptotrichosis represent a type of infections caused by parasites other than those of the acid-fast group, in which there is little tendency to invasion of parts remote from the seat of primary infection except along continuous or directly across contiguous tissues. Although in many of the cases, and especially in the pulmonary streptotrichoses, the duration of infection was already considerable when the patient first came under notice, secondary foci were found in only four. In two cases of appendicitis there was suppurative thrombosis of the portal vein, with infection of the liver and spleen in one case, and of the mesenteric glands in the other; in one case of pulmonary streptotrichosis there was a single cerebral abscess, and in the other, the only case of lung infection with an acute history, there were secondary foci in the spleen, liver, and brain. On the other hand, a tendency to progressive invasion of planes of connective tissue was noticeable in some of the cases. In one case after an infection of the tonsil there was a slow invasion of the subcutaneous tissue on the front of the neck; in a case of appendicitis there was a widely spreading infection of the retro-peritoneal connective tissue; and in cases of pulmonary streptotrichosis there has been extensive infection of the subcutaneous tissue of the chest, after perforation through an intercostal space. The common streptotrichosis of the ox resembles this type of human streptotrichosis, in that in a very large majority of the cases the disease shows little tendency to spread, except by extension along directly continuous tissue from the primary seat of infection, which in a very large majority of the cases is in or about the mouth and pharynx.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, MARYLEBONE-ROAD, N.W.—The annual meeting of the supporters of this hospital was held on Feb. 22nd, Sir Samuel Scott, M.P., presiding. The report stated that 1793 patients were admitted into the wards last year and 2333 patients were attended and nursed in their own homes. While the total expenditure amounted to £7150, the total income was £5580 only, leaving a deficit of £1570. The chairman pointed out that the total expenditure during the past three years had exceeded the total income by no less than £3287. This position was due to the fact that the amounts received from donations and legacies were much less than formerly. With regard to the legacies there had been a great falling off. He earnestly hoped that a larger measure of public support would be forthcoming, otherwise it would be impossible to continue the work on the present scale. Any curtailment of the benefits the hospital provided would entail great hardship on the poor women who sought its aid.

A Clinical Lecture

ON

A CASE OF INTRACRANIAL TUMOUR WITH ALTERATIONS IN THE COLOUR FIELDS.

BY BYROM BRAMWELL, M.D. EDIN., F.R.C.P. EDIN., F.R.S.E.,

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GENTLEMEN,—The patient to whose case I propose to draw your attention to-day is a married man, aged 56 years, a passenger guard by occupation. He was admitted to the infirmary on Nov. 27th, 1909, complaining of attacks of severe crampy pain in the left calf and loss of power in the left leg.

History.—The patient stated that prior to the present illness he had been a healthy and steady man; he had never suffered from any venereal affection. Two months before his admission to the hospital he was suddenly seized with severe pain in the left calf and shaking (clonic spasm) of the left leg; in consequence of this pain and spasm he was unable to stand. The pain disappeared after about four minutes, but the shaking continued for about an hour. After this attack he returned to work and he continued perfectly well for three weeks. He then had a *second attack;* it commenced with severe pain in the left calf; this was followed by a choking feeling in the throat and by loss of consciousness; there was no shaking of the leg during this attack. Five days after the second attack he had a *third;* it was characterised by agonising pain in the left calf, followed by loss of consciousness; in this attack he fell and hurt the left shoulder. After this attack he had a headache. A *fourth attack* in which he did not lose consciousness occurred a few days later; in this attack, after the cramp and pain in the left calf developed, "he felt," he says, "something rise up the left side of the body to the throat, and then go down the left arm." A *fifth attack* occurred a week before his admission to hospital; it was attended with shaking of the left foot, evidently the result of clonic spasm; he timed the movement and found it occurred 60 times in a minute; this spasmodic contraction of the foot and toes lasted for about an hour. After this attack his leg became paralysed, and for six days before his admission to hospital he was unable to walk.

Now that is a very definite history—recurring attacks of painful tonic spasm (cramp) in the left calf, usually followed by painless clonic spasms in the muscles of the left leg; sometimes attended with loss of consciousness; on one occasion on which there was no loss of consciousness attended by an aura which had a very definite course (a feeling of something passing up the left side of the body and then down the left arm); and finally followed by loss of power in the left leg. The family history was unimportant.

Condition on admission.—The patient walked with difficulty owing to loss of power in the left leg; there was also very decided loss of power in the upper part of the left arm. The knee-jerk on the left side was exaggerated; there was sustained ankle clonus on the left side; the plantar reflex showed active flexion on the right side, no toe movement on the left side. There were no sensory derangements. There was no headache. (Six months before he came to hospital he had occasionally had momentary shooting pain in the head on getting out of bed, but we attached no importance to this.) No vomiting; no giddiness; the optic discs were normal. Lumbar puncture showed a marked lymphocytosis (from 200 to 250 lymphocytes in a field of 450 diameters); the fluid escaped under low pressure. The heart, kidneys, and other viscera were healthy.

Diagnosis.—My house physician came to the conclusion that the symptoms were largely functional. This opinion was based on the general impression which the conduct and behaviour of the patient made upon his mind (the patient was very voluble and described in great detail the most trivial feelings and symptoms) and upon the facts—that the difficulty in walking varied very considerably within short periods of time; that on one occasion the pain and twitching (tonic and clonic spasm) which occurred in the

left leg (both the leg and thigh) while he was being examined were relieved by a hypodermic injection of H_2O, a hypodermic injection into the thigh immediately stopped the twitching in the thigh, and a hypodermic injection of H_2O into the calf, which was subsequently given, immediately stopped the twitching in the calf.

I could never reconcile myself to this diagnosis. The sustained ankle clonus in the left (paralysed) leg; the absence of toe movement on the left side (imperfect Babinski on the left side) with active flexion on the right side; the lymphocytosis in the cerebro-spinal fluid; the very definite character of the spasmodic attacks (tonic spasm with cramp and Jacksonian attacks) in the left leg; the march of the aura (up the left side and down the left arm); the loss of consciousness which attended some of these attacks, and the loss of power in the upper part of the left arm (shoulder and elbow),—all seemed to me to point to an organic lesion. The age and sex of the patient also supported this view. The subsequent course of the case has shown that it is correct.

Subsequent progress of the case.—On Dec. 18th the patient had an attack of what appeared to be influenza, associated with some rise in temperature (100·8° F.), headache, and vomiting. (The headache and vomiting were merely temporary; the absence of headache and vomiting is remarkable seeing that great increase of the intracranial pressure was found at the operation—see *infra.*) On the 23rd I found that the retinal veins were unduly full, but there was no swelling of the discs. On Jan. 3rd, 1910, distinct papillitis was present in both eyes, slightly more marked, I thought, in the left disc. On this day perimeter charts of the fields of vision both for white and for colours were very carefully made by my junior house physician. The field for white in both eyes was considerably constricted; the fields for yellow and blue were markedly constricted and were much smaller than the fields for red; the field for yellow was much smaller on the left than on the right side. The chief point of interest in the perimeter charts is the very marked constriction of the fields for yellow and blue in comparison with the fields for red.

Until recently it was supposed that the condition of the fields of vision which is present in this case (constriction of the fields for white and for colours with interlacing of the fields for yellow, blue, and red, the yellow and blue fields being much more constricted than the red fields) was characteristic of functional and hysterical conditions. But quite recently it has been shown by Dr. James Bordley, jun., and Dr. Harvey Cushing[1] that this condition of the colour fields is present in a large proportion of cases of intracranial tumour. They think that the alteration is probably due to increased intracranial pressure; they suggest that, if this is so, this condition of the colour fields will be found not only in cases of intracranial tumour, but in other conditions, such as uræmia, in which the intracranial pressure is increased. With regard to the colour fields in hysteria they state:—

> We find, upon a careful review of the extensive literature, that every conceivable alteration in the form and colour fields has been ascribed to hysteria; but there are two conditions emphasised as being distinctly pathognomonic; one of them the view of the Charcot school, which attributes to these states the concentric contraction of the field for form with partial or complete colour reversal (dyschromatopsia); and the other the view that hysterical subjects have a predilection for red—merely another way of saying that the red field may encircle the blue or the blue become inverted.

Their observations on the colour fields in cases of intracranial tumour are summarised as follows:—

> The data derived from these 56 cases, owing to these special precautions, may therefore be of special value. The figures relate to the conditions which were present at the time of the first examination, often before the diagnosis of tumour was certified:—
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> | | |
> |---|---|
> | 1. Interlacing of colour lines the predominant feature | 25 |
> | 2. Colour inversion the predominant feature | 9 |
> | 3. Hemiachromatopsia without corresponding change in form field | 4 |
> | 4. Islands of blue blindness (scotomata) | 3 |
> | 5. Blue blindness | 3 |
> | 6. Complete green blindness | 1 |
> | 7. Complete achromatopsia | 5 |
> | 8. No colour change whatsoever | 6 |
>
> The striking features are: 1. The fact that in many of the charts the fields for form are unchanged, while there is a very definite change in the fields for colour. 50 out of the 56 cases show colour changes; only 18 showed definite form changes. 2. In four of the cases in which the colours interlaced tumours were found, though there was no choked disk. 3. In 41 out of 42 cases examined subsequent to operation, whether palliative or radical, the colour lines became restored to their normal relative position. The dyschromatopsia seems to depend in some fashion upon an increase of intracranial tension, the relief of which usually causes its early subsidence, and it is possible therefore that it may characterise organic lesions other than tumour.*
>
> * Since these statistics were compiled we have had additional evidence, from sources other than our own clinic, of the correctness of the view that these changes in the colour fields, so long looked upon as peculiar to hysteria, occur with great regularity in patients suffering from the tumour symptom-complex.

But to return to the facts of this case. The optic neuritis has rapidly increased and is to-day (Jan. 21st, 1910) very marked; the fields for white and for colours are much more constricted than they were; the interlacing of the colour fields is still very marked; the fields for green have now completely disappeared; and, what is a very curious feature (if it is a fact confirmed on subsequent examinations), the fields for white are now in places smaller (more constricted) than the fields for red, blue, and yellow. The paralysis of the left upper extremity has now become complete; the hand and forearm are now completely paralysed; three weeks ago the upper arm only was involved. The paralysis of the leg is less than it was on the patient's admission to hospital. The patient continues to be free from headache and vomiting.

I am disposed to think that the paralysis of the leg, which was marked when the patient was admitted to hospital, was probably, in part at least, post-epileptic in character. This would explain the improvement in the condition of the leg. The gradual way in which the paralysis of the arm has extended and increased is highly suggestive of an intracranial tumour. The optic neuritis confirms this diagnosis. There can, I think, be no doubt that we have to do with an intracranial tumour. If this is so, the absence of headache and vomiting is a striking (negative) feature of the case. Headache and vomiting are present in the great majority of cases of intracranial tumour; headache in particular is rarely absent, and I always hesitate to commit myself to a definite diagnosis of an intracranial tumour when there is no headache. In 192 cases of intracranial tumour of which I have notes and which I have recently analysed, headache was absent in 6 cases, or 3·12 per cent.; and vomiting was absent in 42 cases, or 21·76 per cent.[2]

In my cases of intracranial tumour in which headache was absent or slight there was usually little or no increase of the intracranial pressure. The absence of headache and vomiting in this case is certainly suggestive that the intracranial pressure is not increased, and the low pressure under which the cerebro-spinal fluid escaped when a lumbar puncture was made in this case points in the same direction. But against these facts we have the rapid way in which the optic neuritis has developed and become very marked.

There can, I think, be no doubt that the tumour involves either the cortical centre for the left upper extremity or the fibres passing from that centre to the internal capsule. The gradual way in which the paralysis has extended is, I think, suggestive of a subcortical glioma, which has destroyed the arm fibres and irritated the leg fibres or the cortical centre for the leg. The severe cramp-like spasm which ushered in the fits, which were the characteristic feature of the case in its early stages, is, to my mind, suggestive of irritation of conducting fibres rather than of cortical grey matter. In typical cases of Jacksonian epilepsy due to irritation of the motor cortex there is no pain. I have, however, seen severe pain and tonic spasm in at least one other case of cerebral tumour in which there were Jacksonian fits; in that case the tumour was a subcortical glioma.

The marked lymphocytosis in the cerebro-spinal fluid is at first sight suggestive of a syphiloma, but the absence of headache and the very definite statement of the patient that he has never had any form of venereal disease are strongly opposed to this view. In all of the cases of cerebral syphiloma of the cortex which I have seen headache has been a prominent symptom. The age of the patient, too (56 years), is against syphilis; he is rather old for a syphilitic growth. There is nothing in the case to suggest a tuberculoma; in fact, everything is against that form of new growth. Both the positive and negative facts (if we exclude the lymphocytosis in the cerebro-spinal fluid) are in favour of a subcortical glioma.

As regards treatment, an operation is obviously indicated. The rapid way in which the optic neuritis is developing shows this. I expected to find a subcortical glioma, but

[1] Archives of Ophthalmology, 1909, vol. xxxviii., No. 5, p. 451.

[2] Clinical Studies, vol. viii., p. 107.

whether it would be possible to remove it or not was another matter.

Operation.—Mr. J. M. Cotterill removed a large flap of bone over the right motor area. On opening the dura the intracranial pressure was found to be very greatly increased; the convolutions were flattened, but appeared to be otherwise normal; no tumour could either be seen or felt. A large hernia cerebri has since developed at the seat of the exploration; a few days after the operation the patient's mental condition became seriously deranged and during the night he tore off the bandages and made the wound septic. The patient died and was examined post mortem. Below the fungus cerebri there was an area of recent acute cerebritis; deeper down an extensive gliomatous tumour which had extended to the wall of the lateral ventricle and across the under surface of the corpus callosum slightly to the right side. The lining membrane of the ventricles was in a condition of purulent inflammation.

Additional remarks.—The fact that at the time of the operation the intracranial pressure was so greatly increased is a noteworthy point, seeing that there were no headache and no vomiting. We happen to have several other cases of intracranial tumour in the wards at the present time. In all of them the colour fields have been very carefully mapped out by my junior house physician, Dr. H. F. Smith. Let me briefly mention the leading features of those cases.

CASE 2.—This patient, a married man, aged 41 years, was admitted to the infirmary on Dec. 15th, 1909, suffering from headache, vomiting, right-sided hemiplegia, and aphasia. The paralysis had developed gradually six weeks before his admission to hospital; it first affected the right hand, then extended to the arm, leg, and face on the same side. Two weeks before his admission to hospital his speech became affected and his mental condition showed some change—drowsiness, impairment of memory, and irritability of temper. The headache was very severe; it was felt in the frontal and occipital regions and in the nape of the neck. There was double optic neuritis. The visual acuity in each eye was 50/80; there was some constriction of the fields for white and for colours, but no interlacing of the colour fields.

CASE 3.—This patient was a man, aged 22 years, a tinplater by occupation, who was admitted to the infirmary on Jan. 29th, 1910, suffering from headache, vomiting, and giddiness; these symptoms had developed a month previously. The headache was severe and was referred to the frontal and occipital regions. There was marked double optic neuritis. The visual acuity was 6/9. The fields, both for white and for colours, were markedly constricted, but there was little or no interlacing of the colour fields. The right external rectus was completely paralysed and there was some weakness of the left face (left seventh nerve). The abdominal reflex was brisk on both sides. There was no fine tremor of the hands. The knee-jerks, which were brisk on admission to hospital, rapidly became diminished and could only be elicited on reinforcement. The patient was mentally dull. There was no paralysis of the arms or legs, no hypotonia, no incoördination. When the patient walked he tended to fall to the left side. The symptoms seemed to point to a tumour in the posterior fossa, but the localisation was by no means certain; it is possibly in the frontal lobe.

CASE 4.—The patient, a single woman, aged 43 years, was admitted to the infirmary on Dec. 20th, 1909, suffering from fits and complaining of headache and occasional vomiting. The fits, which had commenced a year previously, were of two kinds—ordinary epileptic fits attended with loss of consciousness and localised clonic spasms affecting the right hand and arm, unattended with loss of consciousness and apparently of the nature of Jacksonian attacks. The headache was referred to the left temple; there was occasional giddiness. The optic discs were clear on admission, but a fortnight later slight optic neuritis (observation confirmed by Dr. A. H. H. Sinclair) developed in the left eye. The fields of vision showed right-sided hemianopsia with marked constriction of the fields for white and for colours on the left side. There was no interlacing of the colour fields. The abdominal reflex could not be obtained on either side. The plantar reflex showed an extensor response on the right side. There was no fine tremor of the hands. Under large doses of iodide of potassium the headache and vomiting have subsided; the patient feels very much better. The Jacksonian attacks have ceased. The condition of the optic discs and fields of vision remain as stated above.

THE TREATMENT OF TUBERCULOUS ABSCESSES OF BONY ORIGIN BY CONSERVATIVE METHODS.[1]

THE TECHNIQUE OF ASPIRATION.

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The Treatment of Tuberculous Abscesses.

A FIRST principle governing the treatment of tuberculous abscesses is the avoidance of their spontaneous opening and subsequent sinus formation. The formation of a sinus is almost always followed by secondary infection not only of the sinus itself but also of the focus of origin of the disease, and when this focus is an extensive bony one, as in cases of hip disease and spinal caries, the consequences which ensue are often disastrous. Profuse suppuration and fever exhaust the patient and may themselves cause death, while a general infection is not uncommon. The danger of a tuberculous abscess does not lie in its specific infection: closed, such an abscess is harmless; opened, the prognosis becomes serious. Long before the true nature of a tuberculous lesion was understood the serious results of the spontaneous opening of the abscess were recognised. In 1858 Bouvier said: "It is common to see both children and adults in whom a large abscess causes little inconvenience, but when this abscess is opened acute pain and extensive inflammation gradually exhaust, and may even kill, the patient." But if at all times there has been agreement as to the dangers of the open tuberculous abscess, there has been by no means universal agreement as to the best means to avoid this complication and the dangers to which it gives rise.

During the last century many variations have taken place in the treatment of tuberculous abscesses, owing to the different conceptions which have been held as to their nature and evolution. Three chief epochs may be considered. The first corresponds with the time before Pasteur's great discoveries, when tuberculous bony disease was not separately classified but was commonly confounded with a diffuse group of bony inflammatory conditions. During this period, in the total absence of any conception of sepsis and asepsis, treatment was almost futile. The certainty of the consequences of infection prevented rational attempts at surgical interference. Dupuytren, Larrey, and Michel, indeed, employed large incisions, but David, on the other hand, was strongly opposed to any intervention. Indeed, he states, "I have always observed that patients die in whom an abscess has been opened," and he insisted upon the avoidance of all interference.

At this time the gradual opening of the abscess by the application of caustics was in vogue, but the results were by no means satisfactory. Simple puncture, with or without aspiration (Boinet, Pelletan), had already convinced partisans. Abernethy, in England, practised the "valvular system," which consisted in evacuating the contents of the abscess by introducing the blade of a tenotome obliquely into the tissues in such a way as to form a valvular track between the skin incision and the point of penetration of the abscess cavity, this valve preventing the entrance of air. Boyer, in France, imitated this practice, naming it the "subcutaneous method," but in spite of some passing success the mortality, according to Follin's classical figures, was always considerable, being from 56 to 70 per cent. in hip disease and spinal caries. The failure of a method, which later, when better understood, was to give such marvellous results, was due to many reasons, of which the principal were imperfect local treatment: absence of or inefficient immobilisation, deplorable hygienic conditions, and, above all, complete ignorance of the necessity of adequate sterilisation of skin, instruments, and dressings.

A new era opened with the works of Lannelongue in France and Koenig in Germany. Tuberculous disease of the bone

[1] In this article the authors are especially considering abscesses in connexion with tuberculous disease of spine, hip, and knee-joint.

removed from the chaos of chronic bone diseases became clearly defined and took its proper place. Lannelongue studied the process of the evolution of the tuberculous abscess. He showed that its progressive extension towards the skin was not a mechanical phenomenon, as had up to that time been supposed, but was the result of primary infection and a subsequent excentric destruction of tissues by tuberculous elements advancing much as does a neoplasm. From this new "tuberculome" conception evolved logically a radical surgical treatment, which, supported by the recent discovery of antiseptics, consisted in the total removal of tuberculous tissues. This was the period of extensive surgical interference, complete removal comprising both the excision of the abscess and of its source of origin. This practice, possible and efficacious with small tuberculous foci, exposed the patient to serious risk when it was applied to extensive bony lesions. Moreover, while it was hardly ever possible to effect complete removal of the tissues, the method produced—by the extensive mutilations which it involved—deplorable orthopædic results. Resection of the hip-joint in particular, practised systematically in every case of tuberculous hip disease when accompanied by abscess, left the children on whom it was employed sadly crippled. In spinal caries it was often impossible to excise all the bony tissue invaded by tuberculous disease without removing a great part of many vertebræ. The operations which required these extensive excisions, and often considerable erasions, were followed by surgical shock which could not be stood by all patients. Moreover, the large area of absorption which these operations created exposed the patients to grave dangers of fresh inoculations of tuberculous or other organisms, and often led to the production of secondary visceral or bony lesions. Most surgeons have abandoned these extensive operations, and in France with Félizet disappeared their last defender.

Next there followed a less daring and less radical surgical period which we will consider more fully as it represents to this day the recognised practice in England and the greater part of Germany and the United States. In France it has been almost completely superseded by the adoption of conservative methods (to be presently considered in detail). It is desirable to speak of this limited surgical practice which, abandoning attempts at complete removal of the more extensive bony lesions, confines itself solely to an attack on the abscess itself. Essentially it consists in curetting or excising the abscess cavity and its diverticula under the most rigorous antiseptic precautions. The incision required at the operation is then sewn up and an endeavour is made to secure its primary union. From *a priori* reasons this practice is open to many objections, objections which are confirmed by experience.

Tuberculous abscesses of deep origin such as those which complicate tuberculous disease of the hip-joint or vertebral column are, during the early part of their evolution, subaponeurotic and even sub- or intra-muscular. The aponeuroses of the muscles constitute an extremely strong natural barrier which for a considerable time impedes the advance of the abscess in its progress towards the surface. By dividing these natural barriers and then repairing them, even with all the skill the modern surgeon can bring to his aid, their strength is of necessity impaired. Moreover, it must be remembered that the abscess cavity often refills with considerable rapidity. To avoid the tension which this accumulation of fluid puts on their wound and to dispose of the fluid so collected, some surgeons insert a small drainage-tube for a short time and trust that its track will heal after its removal. Others, more confident, close the wound completely, and in such a way that the strength of the tissues is as little impaired as possible. But even here it must be remembered that the very sutures required are themselves a source of danger, as they form a track which in course of time is likely to be replaced by a sinus through infiltration from the abscess cavity. Even the greatest gentleness in manipulation may result in small areas of local gangrene, especially in the immediate vicinity of the abscess.

The tuberculous pus itself may infect the wound as it escapes from the abscess, even if the walls of the incision are guarded. Thus to deal with a deep tuberculous abscess requires infinite care and skill if these dangers are to be minimised. They must always exist and cannot be altogether avoided.

The formation of a sinus is further facilitated by the injury to which the severed tissues have previously been exposed from pressure within the abscess and to which they are again subjected by the frequent subsequent return of fluid.

It is very probable in many cases where no sinus does ensue that the abscess is a residual one, that the pus it contains is either truly sterile or contains bacilli both few in number and attenuated in virulence. But the most important fact to be considered is that dealing with the abscess cavity does not remove the cause of its formation. The primary lesion which produced it still remains, the pus reforms, the cycle in the history of the abscess recommences. The abscess is secondary to a primary lesion which, even after the evacuation of the abscess cavity, retains its activity. As Ménard in his picturesque but expressive style has often remarked, "Il est étrange, lorsqu'on veut nettoyer un appartement, de s'en tenir au vestibule." And in addition the incision required and the treatment then given to the walls of the abscess and its diverticula leave bare an extensive area ready for further inoculation and its consequences.

What are the practical results of this method? As far as the operation itself is concerned the results at first sight often appear excellent, inasmuch as at the end of a week or so the scar may be perfect. When the stitches are taken out everything appears in good order, but in many cases, after a short lapse of time, which varies from a few days to some weeks or even months, pus re-forms either in the original abscess cavity or in some part of the severed tissues. The scar becomes raised and eventually breaks down. A more or less abundant discharge follows, and almost always in spite of the application of aseptic dressings secondary infection ensues. Excision of the scar before it breaks down does not usually prevent but only postpones the formation of a sinus.

We do not affirm that sinus formation is the rule and that this method does not permit lasting and definite success, but without being able to give exact figures there is evidence that failure is frequent and equals or exceeds the number of successes. We thus arrive at the last phase in the treatment of tuberculous abscesses, the conservative method, which is the subject of this paper. Foreseen, as we have already recorded, by Boyer, Abernethy, and others, it was advocated anew by Verneuil and Verchère in 1885, but it only became generally adopted in France during the last 15 years.

Before describing this method in detail it is desirable to explain the conceptions of tuberculous disease which make it a rational one. The "tuberculome" theory alluded to requires some modifications, and we oppose to it a theory based on the defensive resources of the patient. A tuberculous lesion commonly evokes a reaction. There is the formation of a zone of resistance about the focus of the disease by the formation of fibrous tissue which encysts, limits, and tends to prevent the progress of invasion. Thus the issue is the result of two opposing forces—the disease which attacks the organism and the reaction which this attack provokes. It appears reasonable to reinforce this natural defence and diminish the virulence of the attack of the bacillus, limiting in this way its progress. The essentials for the logical treatment of tuberculous bony disease are secured by the adoption of methods which will improve the general health of the patient by improved hygiene, change of air, suitable climate, life in the stimulating breezes of the seaside or in the country, accompanied by a good and plentiful diet. General tonics in addition play their part.

But in addition to this general treatment much may be done locally. All causes for local irritation should be suppressed, early immobilisation of the injured part should be enforced, and this immobilisation must be uninterrupted and prolonged for a very considerable period, at first at any rate, with the patient in the horizontal position. The use of plaster apparatus, the technique of which has recently been so much improved, permits the advantages of immobilisation to be secured to the uttermost. The earlier this general and local treatment can be adopted the better is the result which will be obtained, and the exact knowledge which one now possesses of the long duration of the disease enables one, by prolonging this special treatment, to avoid those recurrences which are so distressing to the patient and which were formerly so common. As Casteigne observed recently, "By these means the patient himself will make the whole fight against the bacillus."

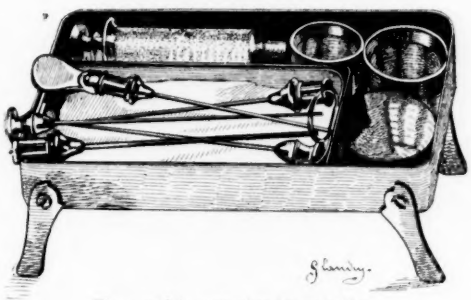
During this rigorous treatment the properties of the abscess itself become profoundly modified. We have had constant proof of this at the Maritime Hospital at Berck and

at the Home at Alton. Children attacked with Pott's disease frequently arrive walking with or without apparatus. Often they have extensive abscesses, obviously increasing rapidly and infiltrating the tissues round them. Complete immobilisation in the horizontal position suffices in the great proportion of cases, and even if it does not cause the abscess to disappear, assists in restraining its activity and arresting its evolution. Moreover, abscesses which are of a mild type, but which were recurrent before the patient had the advantage of this treatment, are cured after some weeks when he has been exposed all day to the stimulating effects of the sea or country air. The abscesses assume less those neoplastic tendencies to which we have previously alluded. They are slower in their appearance, they have less tendency to invade, and a denser encysting capsule appears as evidence of a strong reaction. Spontaneous absorption not infrequently occurs, but if the abscess progresses, then arises the indication for aspiration with or without the assistance of modifying fluids. The value of aspiration has been summed up by Gangolphe, who has said: "Though in appearance less useful than incision, aspiration is much more efficacious and much less dangerous."

The Technique of Aspiration.

Aspiration must be performed under as strict aseptic precautions as would be employed for any ordinary surgical operation. The instruments used must be of material which can be boiled and thereby efficiently sterilised.

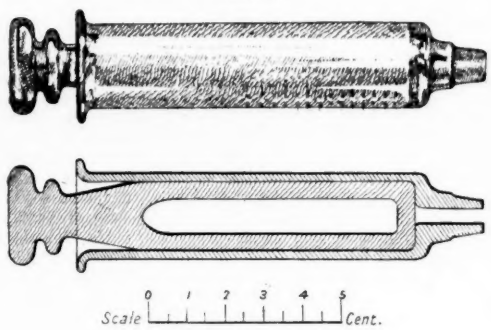
FIG. 1.



The complete apparatus for aspiration.

We are in the habit of using an all-glass syringe of some 10 to 15 c.c. capacity, as shown in the figure, with trocar, cannula, and blunt-pointed probe, of exactly the same size as the trocar. This probe is used for freeing the lumen of the cannula if it becomes blocked by thick or caseous pus.

FIG. 2.

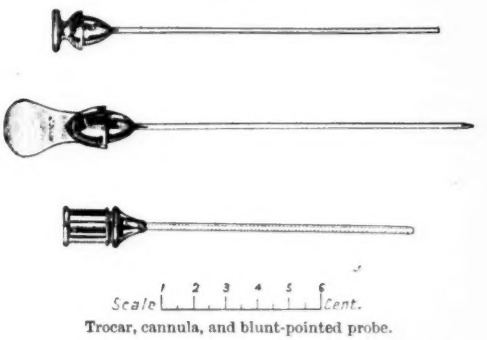


All-glass syringe.

The cannula should have no lateral opening and should not be supplied with a tap, as this is unnecessary. The length of the cannula should be at least 12 cm., so that a deep abscess can be reached and plenty of healthy tissue traversed before the abscess cavity is opened. The calibre of the cannula should not be too large, as a large bore will predispose to sinus formation. The best calibre is from 1·8 to 2 mm.

The apparatus shown in the figure is that employed at the Maritime Hospital at Berck, and completely meets all requirements. It will be noted that the nozzle of the syringe

FIG. 3.



Trocar, cannula, and blunt-pointed probe.

has a large base which prevents it from breaking easily and that its lumen corresponds with that of the cannula and permits the easy flow of even thick pus. There should also be at hand in sterile receptacles those modifying fluids which may be required: sterile dressings and sterile kidney bowl, which we commonly have enveloped in sterile gauze. Sterilised indiarubber gloves should be used by the surgeon for a double purpose. In the first place they reduce the risk of infection, and, secondly, they prevent the fingers from being saturated with the modifying liquids employed, which leave a strong and persistent odour.

The skin of the patient must be thoroughly and adequately prepared as for an ordinary operation, and in addition to sterilised towels we commonly use a similar towel with an aperture of about the size of a five-shilling-piece. Through this aperture the aspiration is made.

Precautions to be taken before aspirating.—The limits of the abscess cavity should be ascertained with great care and its relations with neighbouring organs established. It should be remembered that vessels or viscera in the neighbourhood may be displaced by the presence of the abscess and their positions should be ascertained by palpation or percussion. As a rule, it is not necessary to employ a general anæsthetic, and we only use a general anæsthetic under exceptional circumstances. A local anæsthetic of ethyl chloride is usually all that is required. To prevent the child being frightened by the unfamiliar sights of an operating theatre a screen has been placed across the operating table at Alton, as in the illustration appended (Fig. 4), which screen is covered with a sterilised towel. The patient is not brought into the theatre until everything is ready, and is then quickly placed on the table and the towel fixed on the screen, thereby preventing him from seeing the manipulations which have to be employed. The dressings are rapidly removed, the skin frozen, and the aspiration performed. During the operation the patient is entertained by a nurse, who especially accompanies him for that purpose. With adults, of course, even these precautions are not required.

The actual details of the aspiration require some further description. The trocar should be inserted through as thick a layer of healthy tissue as possible before the abscess cavity is entered, and, furthermore, where possible, the highest point of the abscess cavity should be penetrated, as aspiration into a dependent part of the abscess is more likely to result in the formation of a sinus than if the upper part of the abscess is tapped. Two movements should be employed in the insertion of the trocar—the first, a sharp one, perforates the frozen skin; the second, slow and methodical, guides the point of the trocar into the abscess cavity, it often being possible to hold the abscess itself in the free left hand. Very little experience enables one to ascertain when the abscess cavity has been entered as there is then a sensation of freedom which is exceedingly characteristic. The trocar is now withdrawn and the pus escapes with more or less ease, according to the tension inside the abscess cavity. Soon the flow of pus ceases and the nozzle of the syringe is now introduced into the outer end of the cannula and more pus withdrawn.

It is desirable to aspirate gently and to avoid any violent

manipulations. Sometimes the opening of the cannula is blocked by caseous pus and then the lumen is cleared by the insertion of the probe to which we have already alluded. The quality of the pus varies considerably from a sero-purulent to a thick glutinous fluid, containing masses of caseous pus. According to the consistency of the pus is largely decided what modifying fluids, if any, should be employed.

The removal of the cannula.—This is a delicate point in the operation and on it may depend subsequent sinus formation, for unless it is removed with care the track may become infected as the cannula is withdrawn. It is often useful to aspirate with the syringe during the removal, as the vacuum thus obtained keeps in the cannula the fluid which it contains and prevents its escape into the track while it is being withdrawn. As soon as the cannula is removed the track it has left should be squeezed between the fingers, and after having washed the part with alcohol and ether a dressing should be placed over the minute wound which will keep it closed and compressed. The presence of a dressing prevents secondary infection, which might otherwise take place, especially if, as occasionally happens (though this should not occur), a certain amount of liquid escapes through the skin opening after the aspiration has been made. The employment of a trocar of small calibre renders this accident exceptional. In general the scar of the puncture heals rapidly, and at the end of a few days the dressing may be removed.

An abscess may be cured after one single aspiration. This, however, is not the rule. In general the fluid re-forms in the abscess cavity, and after a period of time, which varies between one and many weeks, a new evacuation is necessary. The tension in the abscess cavity will be the indication when this new aspiration is required. In favourable cases the abscess re-forms in smaller volume and the pus which is withdrawn by succeeding aspirations besides being diminished in quantity, is altered in quality. It is more sanious and sometimes presents a more fluid appearance. This is a good omen and an indication of approaching cure. It is not rare, also, to perceive, at the moment the point of the trocar pierces the wall of the abscess, a sensation of resistance due to the formation of fibrous tissue. If these favourable results are not obtained at the second aspiration, they are usually manifest at the third or fourth. Commonly three or four simple aspirations are necessary to obtain a definite cure in a tuberculous abscess which is easy to empty and of medium severity. Lesser quantity of pus, alteration in its quality, sclerosis of the walls, and subsequent retraction of the abscess cavity are the characteristics of the process of cure.

Simple aspiration is not, however, always as efficacious as in the example just considered. In some cases the trocar penetrates a cavity full of thick pus and caseous material which will not flow through the cannula. The progress of the abscess is not always arrested. It may increase in volume, invading the surrounding tissues, as described by Lannelongue, reaching the skin and there causing ulceration and sinus formation. In such cases, where, in spite of repeated aspirations, the pus rapidly re-collects, where the abscess increases in size, where the surrounding tissues become more and more involved, the prognosis is much more serious and more active treatment than simple aspiration is urgently indicated. It is in such cases that the modifying liquids should be employed.

The common modifying liquids.—The employment of injections of medicated substances into the cavity of a cold abscess dates from the most remote period of medicine. Many pages would be required to give even an incomplete list of the substances used since the time when Fabrice of Aquapendente employed a mixture of wine and oxymel, to our own day, when ferments have been injected. Villemin, in a paper read before the Society for the Scientific Study of Tuberculous Disease, on "The Treatment of Tuberculous Glands," November, 1907, cites: "L'oxymel (Fabrice d'Aquapendente), le vin chaud (Dupuytren), le nitrate d'argent (Velpeau), la teinture d'iode (Boinet et Lugol), le sublimé (Bust et Richet), l'alcool, le sulfate de zinc, la liqueur de Villatte, l'eau iodée, l'iodure de potassium (Bienfait), la solution iodo-iodurée (Félizet), la solution iodotannique (Forgue), l'acide phénique (Hueter, Koenig, Phelps), le calomel (Marcel), les sels d'arsenic (Reclus, Volkmann), l'éther iodoformé (Verneuil), l'huile iodoformée (Mikulicz), le phosphate acide de chaux (Kolischer), le baume de tolu (Sayre, Landerer), l'acide cinnamique (Landerer), la solution huileuse d'essence de girofle (Mannoti), le chlorure de zinc (Lannelongue, Bouilly), la papaine (Bouchut), la teucrine (Mosetig), l'acide lactique (Rafin), le sous-nitrate de bismuth, l'acide salicylique, le thymol (Kocher), le tanin (Ceccherelli), le salol (Grossi), les naphtols A et B (Bouchard), le naphtol camphré (Périer, Reboul), la thiosinamine (Bekess), l'huile créosotée et l'aristol, le

FIG. 4.

Patient prepared for aspiration. The screen hides the operator from the patient.

camphre, le gaïacol, le gaiacol et l'iodoforme (Mosetig), la pyoctanine, l'eau oxygénée (Luton), la formaline, &c." One should add: le thymol camphré (Ménard, Koch), l'éther sulfurique (Vernier), la pancréatine (Calot), la cendre d'os (Frommer), l'eau de mer (Cathelin), l'eau de salins (Reynier), le gaïacol camphré (Simon), la trypsine (Kantorowicz, Fiessenger, et Coyen), le nucléinate de soude (Goldenberg), le chlorure d'or (Bué), l'huile goménolée, &c.

Out of this long list of chemical products we will especially call attention to iodoform dissolved in various vehicles, camphorated naphthol, or, better, its substitute camphorated thymol, which are those commonly employed and which one might call "classical modifying liquids." We shall consider them more especially with regard to their posology, their preparation, and the precautions which it is necessary to observe in their use by reason of their toxicity.

Iodoform.—Since the researches of Verneuil and Verchère in 1886 this substance has become very popular in France, and has taken the place of solutions of iodine in the treatment of tuberculous abscesses. Much more active than these it appears to owe its power to its transformation into nascent iodine under the oxidising influence of organic tissues. It may be either employed in ethereal solution (5 to 10 per cent.) or mixed with oil alone, or mixed with oil combined with guaiacol and creosote. The combined mixture which we use is of this formula: Iodoform, 5 grammes; ether, 10 grammes; guaiacol and creosote 2 grammes of each; and sterilised olive oil 100 c.c. This formula is very similar to that employed by Lannelongue senior. Of the other solutions of iodoform, iodoform combined with ether is most commonly used.

Iodoform combined with ether.—Certain precautions should be observed in the use of this solution, for it may cause accidents of two types—mechanical and toxic. Mechanical accidents were frequent during the period when iodoform ether was first used and were due to the rapid volatilisation of the ether when in contact with the tissues. This volatilisation caused excessive distension of the abscess cavity and was a source of extreme pain to the patient. Sometimes, indeed, it caused syncope, blistering of the skin, and rupture of the abscess (noted by Mignon, Reclus, and others). It is easy to avoid such accidents. Small doses alone must be used. The ether in liquid form must not be allowed to escape through the cannula because the most beneficial action of the iodoform would thereby be lost. During the volatilisation of the ether the iodoform is projected in the form of powder on the walls of the abscess cavity. To obtain this result 2 to 5 cubic centimetres of iodoform ether should first be employed and gently injected into the abscess cavity, the same syringe being used as in the aspiration of the abscess. The fluid being injected the piston is left at the bottom of the syringe. When the ether, acted upon by the warmth of the tissues, commences to evaporate, the piston is gradually pushed away. The syringe is then detached from the cannula and the ether escapes hissing. As soon as a certain quantity of liquid ether appears not volatilised, the syringe is replaced and kept in position until new volatilisation is indicated by the new ascent of the piston. When all the ether appears to have volatilised the cannula may either be withdrawn or, if thought desirable, the injection started anew, but the cannula is not withdrawn until one is assured that no liquid ether remains in the cavity of the abscess.

Toxic accidents.—Iodoform is usually only toxic in doses in excess of those usually employed. Usually from 10 to 20 cubic centimetres of iodoform ether produces no toxic effects on the patient, but, nevertheless, it is necessary to remember that certain subjects possess a special idiosyncrasy towards iodoform, and in these, complications may arise which, though they may not cause death, are sufficiently serious to give the surgeon anxiety. The complications due to an excessive dose of iodoform in a susceptible patient may be both local and general. Locally a violent inflammatory reaction may be produced, with pain, heat, redness, and œdema of the skin. The general symptoms would be rise of temperature, acceleration of the pulse, restlessness, anxiety and irritability, sleeplessness and tremor; skin eruptions have been noted; irritation of the respiratory tract and anuria and albuminuria have more rarely been reported. In some cases nausea and gastric disturbances occur. These untoward symptoms should never be produced and can be avoided by care in the employment of iodoform. The first time iodoform ether is employed only a weak dose of from 2 to 5 cubic centimetres should be used, and in this way the susceptibility of the patient can be safely tested. In general it is not necessary to exceed, even with patients who would tolerate it, doses of 10 cubic centimetres.

Camphorated naphthol.—In spite of the high favour which this substance enjoys amongst certain surgeons we have abandoned its use entirely because of its toxicity. Ménard of Berck reports two fatal cases in his own practice, and has replaced it entirely by camphorated thymol. In May, 1904, Guinard (surgeon to the Hôtel Dieu of Paris) made a noteworthy communication to the Surgical Society on the toxicity of camphorated naphthol. He collected details of 14 cases of severe intoxication with six fatalities. Amongst these accidents was one caused by the injection of ½ cubic centimetre of camphorated naphthol into a suppurating lymphatic gland (Grosjean of Berck), and in another 10 minims (Forgue). In neither of these cases was there any error in the technique of its introduction.

Camphorated thymol.—This substance, though having the same action on caseous material, is far less toxic than camphorated naphthol. Many thousands of injections have been made at the Maritime Hospital at Berck and no fatality has been recorded. Nevertheless, it is toxic and it is necessary to be cautious in its use. Three slight accidents have occurred, and one more serious, in which the patient vomited and had epileptiform fits. Risacher, in his Paris Thesis, 1907, states that the toxicity of camphorated naphthol is three times as great as that of camphorated thymol.

Camphorated thymol is prepared by mixing two crystalline bodies—thymol and camphor—in the proportion of 2 parts camphor to 1 part thymol. The result is a syrupy liquid of strong odour, soluble in ether, alcohol, and chloroform, but insoluble in water. Under the microscope after filtration it is shown to be a true emulsion composed of little globules. For fear of capillary embolism it is desirable, according to Ménard, to add to this mixture an equal part of sulphuric ether, which dissolves the emulsified globules. We would advise that the dose of the mixture of these three substances should not exceed 5 cubic centimetres; from 2 to 3 cubic centimetres are usually sufficient.

The Mode of Action of these Modifying Liquids.

Iodoform.—After iodoform has been employed in the manner suggested, a reaction in the empty abscess cavity, of more or less intensity, usually manifests itself. It is manifested by the reproduction of liquid in the abscess cavity accompanied with some slight discomfort with slight elevation of temperature. The liquid thus produced may become absorbed completely after the first injection, but this rapid cure is not the rule. More often, after some absorption, the quantity of liquid in the abscess cavity still further increases and a fresh aspiration and injection become necessary.

The liquid aspirated is generally characteristic. It is usually blood-stained pus, smelling strongly of iodoform, and is commonly more fluid and more easily withdrawn than the pus which first occupied the abscess cavity. This is a good sign. Palpation of the abscess after evacuation shows that the walls have become thicker.

Iodoform ether appears to act as a drying and as a sclerosing agent. It has very little action if the pus in the cavity was at first caseous, and in fact under these circumstances its use would not be recommended, as here the caseous masses may obstruct the cannula and prevent the exit of the volatile ether and thereby allow undue distension of the abscess. If iodoform is to be employed in an abscess cavity which has contained caseous pus it is preferable to use it in an oily solution, as this danger is thereby avoided.

In an abscess containing caseous pus, however, the use of camphorated thymol is, as a rule, indicated, as this substance possesses a true liquefying action on the caseous masses. They become softened and melt in a space of time which varies, as a rule, from 24 to 48 hours. Reactionary phenomena are provoked, more constant and more accentuated than with iodoform. There may be general malaise with slight fever, but this general reaction is very rarely severe.

The aspiration, practised two days after the injection of the camphorated thymol, results in the withdrawal of a viscous liquid which adheres to the walls of the syringe. It is usually reddish-brown or chocolate in colour, and exhales

a strong odour of camphor. One injection of camphorated thymol may suffice.

The fluid may return into the abscess cavity and require new aspirations, but if it assumes its original caseous form a fresh injection of camphorated thymol will be indicated, the consistency of the pus being the guide to its new employment. It should be borne in mind that the injection of this substance into the abscess cavity may, by its irritating action, give a stimulus to the primary lesion, but such is uncommon in the small doses employed.

How do these modifying fluids act?—After the discovery of the bacillus of Koch, it was thought that their efficacy depended on their bactericidal powers and the question of which was the best to employ resolved itself into ascertaining which was the most powerful antiseptic. (See Villemin's Thesis.) In reality, however, there is no complete parallelism between the bactericidal action of an antiseptic *in vitro* and its efficacy when in an abscess cavity. As an example of this, iodoform, one of the most powerful modifying agents, is one of the feeblest antiseptics (Duclaux). Its selective action on Koch's bacillus cannot be doubted (Villemin, Rovsing, Tilanus, Troje, and Tangl). Nevertheless, *in vitro*, its retarding action on the development of the tubercle bacillus is inconsiderable. It appears, therefore, logical not to ascribe the chief merit of these modifying fluids to their antiseptic action. Anatomically, it is difficult to understand how this action could be efficaciously exercised in abscess cavities which are frequently multiple, multi-locular, and often connected with the primary lesion by a long, sinuous track. So that, without denying some value to the bactericidal action of these substances, it is necessary to seek elsewhere for a full explanation of their efficacy.

We have already alluded to the profound modification which takes place in pus and caseous material when subjected to their action in a closed abscess. If a tuberculous abscess be opened and to its walls be applied one of these agents (iodoform, naphthol, thymol, camphor, or others having similar action), it is possible to follow with one's eyes the changes which take place. The appearance of the tissues visibly changes, the caseous masses appear to become dissolved, and in their place is seen a red injected surface covered with small healthy granulations. True cleansing of the abscess cavity is produced—one might call it a chemical curetting. And as the granulations become more marked, and the fibrinous walls become denser and thicker, the secretions become less abundant. Cytological and chemical examination of the pus before and after injection of the modifying fluids furnishes the key for the explanation of the action which they produce. The cellular condition of the pus is altered and the changes may be summed up as ollows.

After the injection the pus soon becomes full of polynuclear leucocytes. It contains a well-defined fibrinous network, entangled in the meshes of which are cellular débris and red blood corpuscles. In other words, it contains the elements associated with inflammatory reaction, and when camphorated thymol is employed cellular necrosis is the prevailing phenomenon (Calvé and Hamel). The result, therefore, is that this aseptic irritation provokes active dilatation, accompanied with diapedesis of white corpuscles, fibrinous exudation, proliferation of the fixed cells, and, with thymol, destruction and necrosis of the caseous masses. A chronic abscess, then, becomes transformed into an acute but aseptic abscess.

The researches of Coyon and Fiessenger have offered also a chemical explanation of the phenomena recorded. In the pus of an ordinary abscess they have shown that there exists a proteolytic ferment analogous to the tryptic ferment of the pancreas, which has the power to digest coagulated albumins and to transform them into peptones and amido acids. This ferment is liberated in the destruction of the polymorphonuclear leucocytes. It does not exist in the pus of an ordinary tuberculous abscess, and this is explained by the absence of polymorphonuclears in these. The injection of the modifying fluid is the cause of their appearance. Clinical experience supports the results obtained by this histological and chemical research. The injection of modifying fluids is always followed by the phenomena of reaction, more or less marked, but always constant. Interesting in this connexion is a recent paper written by Professor D. MacEwan on the Antiferment Treatment of Acute Suppuration.[2]

Indications for the employment of modifying fluids.—On this point there is some diversity of opinion. Some, as Gangolphe of Lyons, do not employ these injections but simply aspirate, others invariably follow aspiration by injection. To us the middle course appears preferable. Where aspiration alone is sufficient, injection is not necessary, but when that will not procure a cure the use of properly selected modifying fluids is clearly indicated. In cases where there is much caseation simple aspiration is obviously inefficient and sinus formation will, if the abscess is increasing in size, inevitably be the result. This complication is, as we have already indicated, the one which it should be our most strenuous endeavour to avoid.

We have not hesitated to raise numerous arguments against the systematic employment of modifying fluids. We have alluded to their toxicity, to the manipulations which complicate the technique of operation when they are employed, to the increase in the chances of infection which may be brought about, and, above all, to their distinct irritative action which may give rise to undue stimulus of the causal lesion. The very puncture through which they are introduced may become a sinus, a sinus it is true which is usually a temporary one, which very rarely does occur, and which is never as serious as the sinus which follows incision. These reservations being made, and granting to the full what dangers may occur by their use, the conclusion arrived at is that these fluids may be advantageously employed in certain cases—that their use undoubtedly diminishes the risk of one of the most serious complications which can follow a tuberculous abscess, the formation of a sinus.

To sum up the indications for this method of treatment. 1. When simple aspiration is sufficient to empty the contents of the abscess, even though such aspiration may have to be repeated, a cure may be obtained without further operative treatment and without injection. 2. If in spite of repeated simple aspiration the pus re-collects more abundantly each time, the abscess increases in size, and the walls do not show signs of becoming denser by the formation of fibrous tissue, then iodoform ether will be indicated on account of its drying and sclerosing properties. 3. If the contents of the abscess are caseous, then cautious injection of camphor-thymol-ether solution in doses of from 2 to 5 cubic centimetres, not exceeding the latter, should be employed. If the inflammatory action is too active after this injection, moist dressings to the part will restrict the inflammation during the period which elapses between the injection and the time the material injected has accomplished its work in dissolving the caseous material and permitting its evacuation. (Excessive inflammation is exceedingly rare in properly selected cases.) 4. The abscess sometimes increases rapidly, is extensive, the tissues around are being invaded, and the general condition of the patient is unsatisfactory. This form is rare and coincides usually with defective treatment of the initial lesion, either by faulty immobilisation or by neglect of the general hygienic treatment, or both. In this case one's first duty is to make good the defects in treatment—to adopt rigorous immobilisation and to see that the general treatment is conducted on rational and hygienic lines. If in spite of all these aids to treatment of the abscess it does not decrease in size further measures must be adopted. Simple aspiration will not empty the abscess of its contents, because they are usually in these circumstances caseous. Iodoform ether is contra-indicated, because the presence of caseous material may obstruct the cannula and may provoke accidents of a mechanical nature. Camphorated thymol is too irritating and may act on the primary lesion and so accelerate its evolution. Here, then, the oily mixture of iodoform, containing creosote and guaiacol, according to the formula we have suggested, should be used.

The Results of the Conservative Method.

We would emphasise the necessity of combining the treatment of the causal lesion with that of the abscess itself. That is to say, the three cardinal principles should be adopted: (1) maximum employment of general treatment; (2) strict and uninterrupted immobilisation in the horizontal position over a prolonged period, if the lesion is one of the spine, hip, or knee; and (3) the employment of aspirations

[2] Brit. Med. Jour., Jan. 22nd, 1910.

with or without injection of modifying fluid. The results obtained are very gratifying and cure takes place in from 95 to 98 per cent. of cases so treated.

Sinus formation.—This occurs in the proportion of from 2 to 5 per cent. of cases. With perfect technique it would be even less. We are not in this paper considering the treatment of open tuberculous lesions where sinuses already existed. We simply state that the sinus formation which may unhappily follow aspiration never has the same grave features as are present with sinus formation secondary to surgical interference or spontaneous opening of the abscess. A sinus which has formed as a result of aspiration is a minute one, and is usually healed without secondary infection, which is easier to prevent. It must be extremely rare that extensive infection resulting in prolonged suppuration, and often in lardaceous disease, occurs in properly conducted treatment on the lines we have indicated. One may say that a fatal result may always be avoided except in those rare cases which will not respond to any form of treatment.

Statistics.

We will now consider the statistics for the year 1908–09, which comprise all cases of hip disease and spinal caries complicated by abscess which have been treated by this method by one of us at Berck. There were 29 cases of spinal caries with abscesses. Of these 27 were cured, 2 remain with sinuses which are not infected and in which the discharge is diminishing and the general condition is good. Hip disease, 33 cases. Of these 32 were cured. One remained with a sinus. In this case the sinus was serious, due to secondary infection caused by improper sterilisation of the instruments employed in aspiration. The number of aspirations was from 1 to 21 in each case. The mean in hip disease was 4 to 5, in Pott's disease 2 to 5. The total result in 62 cases was 59 cures. At the Cripples' Home at Alton, during the last months of 1909, 23 closed tuberculous abscesses connected with lesions in the spine, hip, and knee have been treated by aspiration. Eight spinal abscesses were aspirated. The greatest number of aspirations required for any one case was 12, the average number required was 3. All are apparently cured and in no case has a sinus formed. Thirteen cases of abscess in connexion with tuberculous disease of the hip were treated by aspiration. Of these 12 have been apparently cured. In one case a small sinus persists, but is not infected. The greatest number of aspirations required for any one case was 14. The average number was 4. Two abscesses in connexion with the knee-joint have been similarly treated, and both apparently cured. One case was especially interesting. The patient was suffering from tuberculous disease of both hip-joints. An abscess had been opened in London behind the left hip-joint and a sinus persisted when the child was admitted to the home. Another abscess was found unopened in front of the left hip-joint and a third abscess was found unopened in connexion with the right hip-joint. These two latter abscesses were treated by aspiration and are both healed. The sinus, however, with which the patient arrived still persists. A considerable number of cases have been admitted with abscesses, but where these were small and have steadily grown less, under adequate mechanical treatment, applied under the best hygienic conditions, no aspirations were performed. In the course of time the majority of these disappear without any surgical interference whatever.

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ON THE VARIATIONS OF TEMPERATURE IN PHTHISIS DURING THE MENSTRUAL PERIOD.

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THE temperature in pulmonary tuberculosis is now generally recognised as an important guide in regard to diagnosis, prognosis, and treatment. Recent observations have shown that exercise exerts an important influence upon the temperature, and variations in the temperature chart have been taken as a measure of the degree to which autoinoculation occurs, and have further been employed in graduating the amount of exercise the patient is allowed to perform. Moreover, the temperature is of great importance in studying the effect of therapeutic doses of tuberculin when this is administered. It is therefore a matter of importance to study carefully any variations which may occur in it in connexion with the normal functions of the body. It is well known that menstruation is associated in healthy women with certain variations in the body temperature. Disturbances of this function are so commonly met with in pulmonary tuberculosis in all stages that it would seem to be a matter worth investigation as to whether any greater change takes place in this disease than in the normal.

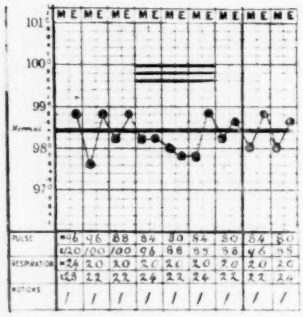
I have therefore analysed the records of 500 female patients between the ages of 18 and 45 years suffering from this disease in the Mount Vernon Hospital, the honorary medical staff having courteously granted me full use of them. In this institution the patients' temperatures are taken twice daily at 12-hourly intervals, the morning temperature being charted between 5 and 5.30 A.M. and the evening between 5 and 5.30 P.M. It has been the practice for many years past to mark the menstrual period on the patient's chart by horizontal red lines above the temperature curve, commencing on the day that the flow begins and continuing them day by day until the end of the period; in this way the effect if any of the catamenia on the temperature can be readily observed. For convenience of classification the cases have been divided into the three classes suggested by Dr. Turban[1] of Davos:—A, early cases, including under this head all those with not more than one lobe affected; B, cases with two lobes affected; and C, advanced cases—namely, those with three or more lobes affected or complicated by laryngeal or intestinal implication.

In Class A there were 284 cases, being 56·8 per cent. of the

[1] Turban: Diagnosis of Tuberculosis of the Lung, 1905, p. 55.

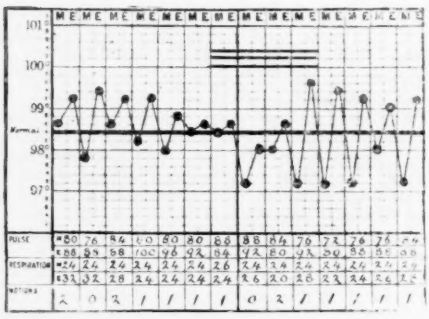
total; the catamenia showed an influence on the temperature in 68 of these—that is, 23·9 per cent. of them. The most usual type of change proved to be a depression varying from 1° to 1·5°, those cases having most pyrexia showing the widest range of change; the depression in the majority of cases commenced with the flow, in others it was deferred to the second or third day. In only three instances did the fall precede the flow. The details of this class are as follows:—Amenorrhœa, 34 (11·9 per cent.); no influence on the temperature, 182 (64·0 per cent.); showing temperature variations, 68 (23·9 per cent.); total, 284 (99·8). Of the 68, 51 showed a depression in temperature (75 per cent.); 14 showed a rise in temperature (20·5 per cent.); and 3 showed a rise before the period, depression during, and a rise after the period (4·4 per cent.). (See Charts 1, 2, and 3.)

CHART 1.



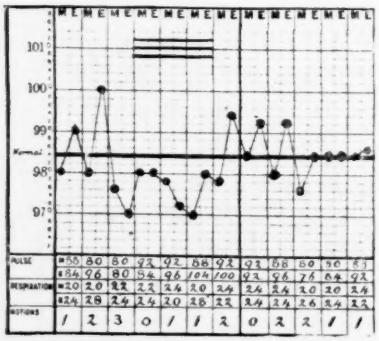
A simple depression in temperature during the flow, the most usual type of change in Class A. The horizontal lines on the chart indicate the duration of the flow.

CHART 2.



A slight premenstrual fall, with a more pronounced depression during the flow. Class A.

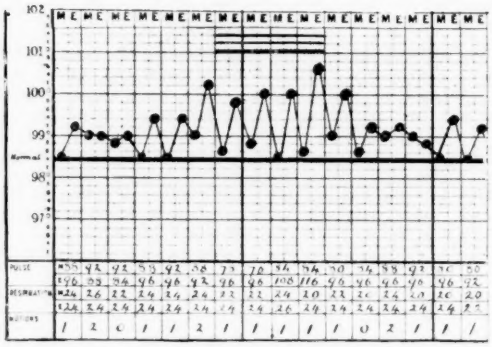
CHART 3.



A premenstrual rise of temperature with a depression during the period, followed by a rise for three days after the period. Class A.

In Class B the cases numbered 160; in these the catamenia had an influence on the temperature in 30 cases (18·7 per cent.). The change in the majority of these was a rise in temperature either for one or two days preceding the flow and continuing during the period or rising during the menstruation for one or more days. The next commonest effect was a fall in the temperature during the period. This was noticed in 12 cases. Details in this class are as follows:—Amenorrhœa, 38 (23·7 per cent.); no influence on the temperature, 92 (57·5 per cent.); showing temperature variations, 30 (18·7 per cent.); total, 160 (99·9). Of the 30, 12 showed a depression (40 per cent.); 16 showed a rise (53 per cent.); 1 showed a rise before and depression during the period (3·3 per cent.); and 1 showed a depression during the period followed by a rise afterwards (3·3 per cent.). (See Chart 4.)

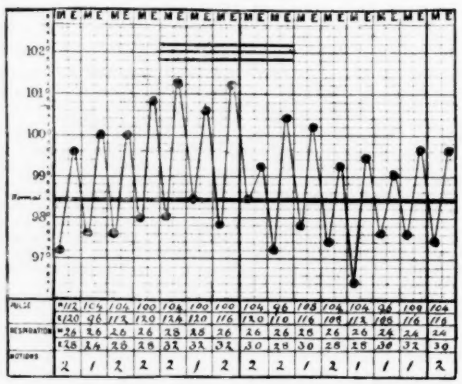
CHART 4.



Showing a rise on the day preceding the flow, which continued during the period. Class B.

Class C contained 56 of the cases; in 7 of them the general character of the temperature was altered by the menstruation. In more than half of these the effect was to raise the temperature both before and during the period. The number of cases in this group showing the temperature variations is comparatively small, largely owing to the striking increase in the proportion of cases with amenorrhœa. Details in this class are as follows:—Amenorrhœa, 35 (62·5 per cent.); no influence on the temperature, 14 (25 per cent.); showing temperature variations, 7 (12·5 per cent.); total, 56 (100·0). Of the 7, 1 showed a depression (14·2 per cent.); 4 showed a rise (57·1 per cent.); 1 showed a rise before the period, depression during, and rise after the period (14·2 per cent.); and 1 showed a rise before the period and a depression during the flow (14·2 per cent.). (See Chart 5.)

CHART 5.



Shows a rise of temperature, both before and during the period. Class C.

The results may be briefly summarised in the following table:—

No. of lobes.	No. of cases.	Temperature variations.	Depressed.	Raised.	Other changes.	Amenorrhœa.
		%	%	%	%	%
1	284	68 = 23·9	51 = 75·0	14 = 20·5	3 = 4·4	34 = 11·9
2	160	30 = 18·7	12 = 40·0	16 = 53·3	2 = 6·6	38 = 23·7
3 or more.	56	7 = 12·5	1 = 14·2	4 = 57·1	2 = 28·4	35 = 62·5

The accounts given in the text-books on the influence of menstruation on the temperature in healthy women are not entirely concordant. Lewers [2] says the temperature is a little raised, about half a degree for some days before the flow, similarly falling again during and after it. Galabin,[3] quoting Stephenson, says: "The curve of temperature is above the mean for about half the month, rising to about half a degree above the mean line; it crosses and falls below that line about or shortly before the onset of menstruation and sinks to a similar depth below it for about a similar interval." Hart and Barbour [4] state that during the few days before the flow the temperature is slightly raised; J. C. Edgar [5] says the temperature is slightly elevated often by 1° F. at the onset; whilst Webster [6] says the temperature rises half a degree above the average before the period, falls during the flow, and goes down to half a degree below the average immediately after the period. Dudley [7] says that there is a slight elevation of temperature at the onset. The most explicit account that I have been able to find is that of Dr. A. E. Giles,[8] who states that "the temperature begins to rise about the middle of the inter-menstrual period, attaining its maximum two days before menstruation. There is a sudden drop on the day before the flow begins, with a second slighter drop towards the end of the period. It then rises slightly for the first week after the cessation of menstruation, and there is a third fall at the beginning of the intermenstrual period. The total variation only amounts to half a degree Fahrenheit." He also finds that "the pulse curve corresponds fairly closely with that of the temperature." Giles's results are in general accord with those of Jacobi [9] and Reinl.[10]

It will be seen that the changes associated with pulmonary tuberculosis are, as might have been expected *a priori*, progressively more marked in proportion to the severity and extent of the disease. Thus in early cases the changes most frequently found are a depression in the temperature, somewhat more marked but otherwise similar to that occurring in the healthy woman, except that the temperature falls on the first day and not on the day preceding the flow; and, further, the progressive and preliminary rise in the intermenstrual period appears to occur but rarely, being present in only three of my cases. In cases with two lobes affected a definite rise occurs in more than half of them, whilst in cases with three or more lobes affected a simple depression occurs in only 14·2 per cent. of the cases, a rise in 57 per cent. I was unable to trace any definite variation of pulse-rate and respiration with these changes of temperature. In like manner the amenorrhœa that is so well recognised as a sequel of this disease is found to increase progressively in proportion to the extent and severity of the disease. In early cases it occurred in 11·9 per cent., in the two-lobed in 23·7 per cent., whilst in the severe and advanced it occurred in as many as 62·5 per cent. The only references of the effect of menstruation on the temperature in pulmonary tuberculosis that I have been able to find in the literature on this disease are by Dr. F. W. Burton-Fanning [11] who states as follows: "I find that in about half my female patients a characteristic rise of temperature occurs during the week that precedes the onset of menstruation; the average increase of temperature amounted in my cases to 0·50 and lasted for an average period of six days ending on the day before menstruation or extending over the first or second day of the flow"; and Dr. F. M. Pottinger [12] who states that, "It is not uncommon in females suffering from tuberculosis to have a rise in temperature associated with the menstrual period. It usually comes on a few days before the flow, but may not appear until it is established. In early cases this often amounts to only a fraction of a degree or a degree, but in advanced cases I have frequently seen a maximum of 103° or 104°." The fact that the temperature appears to rise definitely in the more advanced and febrile cases would seem to indicate that the rest in these cases should be more rigidly enforced at the periods than at other times, and in any case it would be wise to postpone drawing inferences from the temperature chart in a case first seen during menstruation as to the nature and type of the lesion until the period is over, and the influence of menstruation upon the temperature can be eliminated.

West Norwood, S.E.

[2] Lewers: Diseases of Women, London, 1903, p. 49.
[3] Galabin: Manual of Midwifery, London, 1904, p. 42.
[4] Hart and Barbour: Manual of Gynæcology, Edinburgh, 1904, p. 83.
[5] J. C. Edgar: Practice of Obstetrics, London, 1907, p. 21.
[6] Webster: Diseases of Women: Philadelphia, 1907, p. 112.
[7] Dudley: Principles and Practice of Gynæcology, London, 1908, p. 23.
[8] Giles: The Cyclical or Wave Theory of Menstruation with Observations on the Variations in Pulse and Temperature in Relation to Menstruation, 1897, Obstetrical Transactions, vol. xxxix.
[9] Jacobi: Question of Rest for Women during Menstruation, 1877 New York.
[10] Reinl: Die Wellenbewegung der Lebensprocesse des Weibes, Volkmann's Sammlung, No. 243.
[11] Burton-Fanning: The Open-air Treatment of Pulmonary Tuberculosis, London, 1909, p. 36.
[12] Pottinger: Pulmonary Tuberculosis, London, 1908, p. 57.

A NEW OPERATION FOR PROLAPSE OF THE RECTUM.

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PROLAPSE of the rectum in adults is a condition which, as a rule, is difficult to cure, and the large number of different operations which have been advocated for the treatment of this condition are sufficient evidence of the difficulty that is often experienced in curing such cases. I am, of course, excluding those cases in which a short prolapse occurs as a complication of severe and old-standing piles, where a ring of mucous membrane comes down with the piles, as these cases can be efficiently treated by a modified Whitehead's operation.

The operations for prolapse of the rectum in adults may be divided into two classes—those which aim at suspending the bowel from above, which includes all the different forms of colopexy, and those which aim at fixing the rectum itself into the hollow of the sacrum and to the pelvic fascia. These include all the different forms of proctopexy. The latter type of operation is, except in cases of prolapse of the third degree, the better, as it aims at restoring the natural supports of the rectum, and also it does not necessitate opening the peritoneal cavity.

Our object in performing any form of proctopexy is to anchor the rectum by adhesions to the sacrum and surrounding pelvic fascia. It is obvious that the more extensive and firm these adhesions are the better will be the result. Stitches, however carefully placed, cannot be permanently depended upon to hold up the rectum, and, further, it is quite impossible to stitch the rectum into the hollow of the sacrum. Even if the stitches are carried right round the sacrum, as in Tuttle's operations, this object is not attained, as the sacrum is hollow from side to side as well as from above downwards, and consequently the stitches cannot draw the post-rectal wall against the sacrum, as they remain stretched across the hollow like a bow-string.

The usual method of performing proctopexy is to stitch the posterior rectal wall to the tissues in front and on each side of the coccyx. The stitches, however, cannot permanently anchor the rectum, as they cut their way through the tissues and become loose in a very short time, and the ultimate result, in those cases where the operation succeeds, is due to the adhesions formed between the parts during the time the stitches hold.

The following operation is both simple and effectual as it so anchors the rectum as to render any possibility of the post-rectal wall prolapsing impossible. The preliminary

treatment consists of getting patients' bowels well cleared out previous to the operation so that they may be left confined for some time afterwards. If at the time of the operation the prolapse is down it should be entirely reduced and the bowel thoroughly washed out with lysol solution—one drachm to the pint. A small plug of gauze should be passed into the bowel to prevent any leakage during the operation. The whole of the perineum and buttocks are then carefully aspecticised and a transverse incision about two inches long is made about half way between the tip of the coccyx and the posterior margin of the anus. This incision should divide the attachment of the external sphincter to the coccyx and should be carried down until the posterior rectal space is opened. With the gloved finger this space should be freely opened up. The height to which the posterior rectal space should be separated depends upon the length of the prolapse, but in any case it should be well up into the hollow of the sacrum. The space should also be opened up slightly to each side of the bowel. Next a long strip of sterilised gauze should be lightly packed into the space thus made in the hollow of the sacrum and behind the rectum. The end of the gauze is left protruding from the wound, which must be left open. A lot of gauze must not be pushed in, but only just sufficient to prevent the rectum and the tissues on the front of the sacrum from healing together by primary

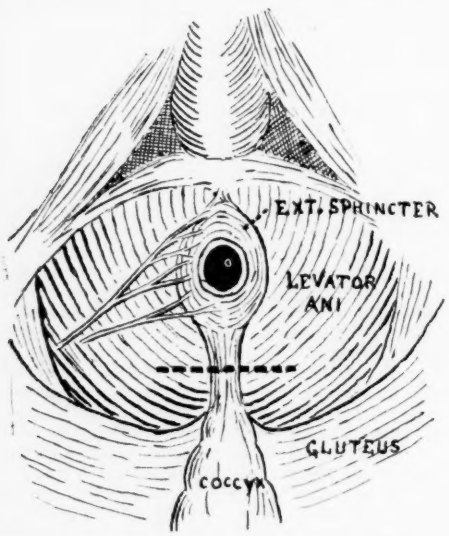


Diagram showing the muscles of the perineal and anal region. The transverse dotted line shows the position of the incision.

union. The external wound is carefully dressed, a piece of gauze being placed in the anus to prevent the dressings from becoming soiled. If the anus is very patulous some form of plastic operation may be performed at the same time to narrow the opening.

After the operation the patient must be kept lying flat in bed, and not allowed to sit up for any purpose. He should be given a very light and easily digested diet so as to enable the bowels to be kept from acting for some days. The gauze is removed on the third day and the wound then re-packed lightly each day, the wound and the space behind the rectum being allowed to close slowly by granulation, less and less gauze being introduced at each dressing. The bowels are opened by oil enemata on about the sixth or seventh day with the patient in the recumbent position, care being taken to prevent the prolapse from coming down. The wound heals up in about three weeks, but the patient should not be allowed to sit up for a full month after the operation.

After the wound has healed, if a finger is passed into the bowel, it will be found that the whole posterior wall of the rectum is firmly attached to the hollow of the sacrum by the fibrous tissue formed during the healing of the posterior wound. The posterior rectal wall is in this way much more effectually anchored than is possible by any stitching, and, moreover, is attached in the hollow of the sacrum where it cannot be stitched.

The division of the attachment of the external sphincter to the tip of the coccyx is an advantage, as in consequence of its division the anus is displaced slightly further forward, and this, combined with the posterior fixation, considerably increases the angle formed by the terminal portion of the rectal canal, and so tends to prevent further prolapse.

This operation has the advantage of great simplicity, while at the same time it affords a more effectual means of anchoring the posterior rectal wall than any operation depending on stitching can possibly do. The only risk of the operation is sepsis, which might be serious owing to the cellular spaces opened up, but with proper antiseptic technique this should be negligible, and after granulation has commenced, which will be after the first two or three days, no serious sepsis can occur, even should the wound become infected.

I have performed this operation four times with complete success, and appended are brief notes of three cases:—

CASE 1.—A woman, aged 42 years. Prolapse of second degree for three years. Bowel came down when the patient walked and caused great misery. About five inches of bowel prolapsed. The anus was patulous. Operation performed in 1904. The patient never had any return of the prolapse after the operation, and when last heard of was quite well.

CASE 2.—A man, aged 38 years. Severe prolapse of the rectum for over a year. The slightest strain caused the bowel to come down, and the patient suffered great inconvenience. About five inches of bowel protruded through the anus on straining. The anus was very patulous. Operation in 1904. When the patient began to walk after the wound had healed there was a slight prolapse of the anterior rectal wall, about one inch coming through the anus. This was treated by ligature at a second operation. Result, cured.

CASE 3.—A woman, aged 57 years. Prolapse for 14 years. Five months ago was operated on, Whitehead's operation being performed. This, the patient said, did no good, and the prolapse had been worse since. On examination the upper part of the rectum prolapsed through the anus. Operation, 1907: Posterior wall of rectum anchored by producing adhesions to sacrum and some loose mucous membrane on anterior wall just within anus ligatured. Result, cured.

In each case about 5 inches of the bowel came down previous to operation. One patient, in whom the anus was very patulous, had a small prolapse of the anterior rectal wall when he began to get about again consisting of about an inch of the mucous membrane on the anterior rectal wall just within the sphincters. This portion of the mucous membrane was removed by ligature at a second operation, in the same way as in treating piles, and he then had no further trouble.

The advantages claimed for this operation are: (1) it securely and permanently fixes the whole posterior rectal wall into the hollow of the sacrum; (2) it is simple, and does not involve any serious risk; (3) it does not involve the cutting of any nerves or important structures; and (4) it restores the bowel to as near the normal condition as is possible.

Cavendish-place, W.

WORTHING AND DEFECTIVE SCHOOL CHILDREN.—The Worthing education committee on Feb. 22nd adopted its scheme for the treatment of defects revealed by the medical inspection of school children. The committee has been fortunate in having the advice of a medical practitioner as a member of the education authority. Mr. H. J. M. Milbank-Smith voiced the feelings of the medical profession at Worthing when he said that the profession held strongly that work given by the education authority should not be undertaken by local charities or by private benevolence, but should be paid for by the authority. It is upon these lines that the education committee has finally approved of its scheme, and care has been taken not to cause inconvenience to any section of the community. Precautions will be taken to ensure that only those children shall be treated whose parents are found unable to pay for medical advice. The cost of ointments, lotions and dressings, &c., is estimated at £5 per annum. For the treatment of defective eyesight it is proposed to appoint a special ophthalmic surgeon, and it is estimated that from 200 to 300 cases every year will be treated at a cost of 20 guineas per 100 cases. Parents are to pay for the cost of glasses, wholly or partially, and the cost to the education authority for the supply of glasses is estimated at £20 per annum. For tonsils and adenoids hospital tickets are to be given, the estimated cost for 100 such cases being £21 per annum.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A NOTE ON A CASE OF POST-PERITONEAL HÆMATOCELE COMPLICATING A LARGE UTERINE FIBROID; OPERATION; CURE.[1]

BY WILLIAM ALEXANDER, M.D., M.CH. R.U.I., F.R.C.S. ENG.,

LECTURER ON CLINICAL SURGERY, UNIVERSITY OF LIVERPOOL.

THE patient, a single lady, aged 50 years, complained of dyspnœa and general weakness. On examination the abdomen was found to be occupied by a large, solid tumour, freely moveable, and a little tender. The periods were regular and not excessive, and the functions of the bowels and bladder were normal. The tumour was considered to be a solid ovarian, and an operation was recommended. On opening the abdomen, it was found to be a large fibroid, weighing 12 pounds, and was removed in the usual way. There were no adhesions, but the tumour was observed to project rather unduly forwards. After the removal of the tumour and the pads which had been used to keep the intestines out of the way, a diffused mass consisting of a dark layer of blood was seen extending over the front of the spinal column and between the layers of the meso-colon as far up as the hilum of the liver. The broad ligaments did not contain any blood at the time the hæmatocele was first discovered, but they gradually filled up with blood from above. A glass drainage-tube was placed in the right broad ligament and the abdomen was closed. Before the operation the pulse-rate was 100, and at the end of the operation 108. The rapidity of the pulse was thought to be accounted for by a pre-operative rupture of a vein and the gradually increasing venous hæmorrhage, which possibly had been going on for some two weeks before the operation. The pulse-rate remained rather rapid for a few days after the operation, and the patient suffered from some sickness, but she gradually improved, the pulse-rate returned to the normal, and finally she made a good recovery. When seen seven months after the operation the patient was well and no trace of the hæmatocele could be found.

Pelvic hæmatoceles of a certain size are not uncommon, but are usually limited to the broad ligaments, and are due to the rupture of an extra-uterine gestation. In some cases, however, they are post-operative, and due to the puncture of a vein in the broad ligament. When the abdomen was opened the tumour filled the whole space, and was very prominent, the crest of the swelling being on a level with the colon. The danger of the condition was very great, and a bad prognosis was given; fortunately asepsis was maintained throughout, and the mass of blood was gradually absorbed. I have not been able to find any record of a similar case. It is probable that the insertion of the drainage-tube into the broad ligament was not really advisable and did little good, but for the first few days a small quantity of blood escaped through the tube daily. It was introduced on the spur of the moment, when it seemed desirable to have the patient back in bed before the supposed inevitable collapse occurred.

Liverpool.

A CASE OF RHEUMATOID ARTHRITIS TREATED BY THYROID EXTRACT.

BY GEO. STEELE-PERKINS, M.D. EDIN., M.R.C.S. ENG., L.R.C.P. LOND.

AT the end of April, 1909, a saleswoman, aged 28 years, got rheumatoid arthritis in both knee-joints, with much thickening, and effusion of fluid into both joints; there was also much pain in the legs and at the back of the knees and thighs. The condition arose from leaving off a flannel petticoat and wearing open-worked stockings whilst the weather was still cold. Her work necessitated her standing all day, and she was unable to rest as her living depended on her continuing at her duties.

I tried most of the ordinary methods of treatment for the condition without any beneficial result—viz., alkalies, iodide of potassium, colchicum, salicylates, aspirin, arsenic, quinine, massage, ung. hydrarg. co. locally, and strapping, abstention from alcohol, suitable diet, &c.; also blistering on two occasions, but with rest only from Saturday afternoon to Monday morning.

On August 21st her 17 days' annual holiday commenced. She went to bed, had both knees thoroughly blistered, and in a week all fluid had disappeared from the left knee and nearly all from the right knee. The left knee had ung. hydrarg. co. applied to it; the right knee had the same, and in addition was strapped. On the 28th she went to Folkestone, passing her time either sitting about or else in a bath chair, not walking. On Sept. 6th she returned from Folkestone; the knees were in the same condition as when she went away, with still a good deal of thickening about the joints and a little fluid in the right knee. On the 7th she returned to her duties. On the 10th there was fluid in the left knee and the fluid in the right knee had increased. The condition got worse, pain in the knees returned, and she was soon as bad as ever. By the aid of elastic knee-caps she kept about and went to business, standing all day.

On Oct. 16th Dr. J. W. H. Eyre examined bacteriologically her blood and also fluid drawn off from the right knee-joint with a view to vaccine treatment. Dr. Eyre's report was: "No indication from blood examination of lowered resistance to any micro-organism, and the fluid from knee-joint remains sterile at the end of four days. None of the cultures showed any micro-organisms whatever, so cannot prepare a vaccine or even suggest the use of a stock vaccine, as there is no indication what to try."

The patient then had ordinary baths, light baths and heat baths, with massage, none of which did any good.

On Nov. 9th, finding on examination that her thyroid was small, I commenced giving thyroid extract, grs. ii. three times a day, and after a week four times a day. On Jan. 15th, 1910, all the pain and nearly all the swelling had gone from both knees; there was no fluid in the left knee and hardly any in the right knee. A week later there was no fluid in the right knee, and on the 23rd all the swelling had disappeared and the thyroid extract was stopped, it having been reduced to grs. ii. three times a day for the past fortnight.

The only ill effects experienced from the extract were that the patient got a little thin about the neck, and felt tired at the end of her day's work. These effects passed off soon after her ceasing to take the extract. The patient did not stay away from business on any occasion, and now, a month since ceasing to take the extract, she remains quite well, her knees in no way troubling her.

Wimpole-street, W.

AN INTERESTING CASE OF COBRA BITE: RECOVERY AFTER TREATMENT.

BY N. BOSE, M.B., C.M. EDIN.

A ROBUST and well-built Sikh, named Shaih Singh, aged 30 years, a gate-keeper in the employ of the East Indian Railway Company, was admitted into the hospital of the company on Oct. 27th, 1909, at 10.30 P.M., having been bitten on the calf of the leg by a young black spectacled cobra 3 feet 6 inches in length, which he killed by means of a "lathi" as soon as the bite was inflicted. Immediately after the bite he felt burning and shooting pain right up the limb. He put two strong cord ligatures above the seat of the bite and was brought to hospital by his friends two hours after the incident, the dead snake being brought with him. The man was very restless and could not walk or stand properly. He complained of burning shooting pain in the limb and as far as the shoulder. The pupils were dilated, the pulse was feeble with a rate of 50 per minute, and the respirations were laboured. The wound was a circular one of about the size of a half-rupee on the inner side of the calf and was skin-deep.

An indiarubber elastic tourniquet ("Reliance") was at once applied above the seat of the bite in addition to the cord ligatures which were already in position. About 20 free

[1] Abstract of a paper read before the Obstetrical Section of the Royal Society of Medicine on Feb. 10th.

deep incisions were given around the wound, which was also excised and enlarged. It was allowed to bleed freely for about ten minutes and was then washed with hot water and afterwards crystals of permanganate of potash were rubbed into the wound and the incisions were made. During the course of the operation the patient vomited once and was very restless on account of pain. In half an hour after the operation the tourniquet was taken off and the cord ligatures were relaxed as the patient could not bear the pain any longer. Within an hour after this he gradually sank to unconsciousness, the pulse was very feeble and thready and came down to 30 per minute and so the man's life was despaired of. However, a hypodermic injection of strychnine nitrate, gr. 1-15th, and digitalin, gr. 1-100th, with distilled water ʒi. was given. After the injection the pulse improved to a certain extent but the drowsiness persisted and the patient vomited once more. He was kept roused and made comfortably warm by means of hot bottles to the sides and blankets, and the following two mixtures were given alternately every half hour: (1) Pot. permanganas, gr. ii.; aqua pura, ʒi. (2) Spt. ammon. ar., spt. æther. sulph., and spt. æther. nit., of each ♏xx.; liq. strychninæ, ♏iv.; tr. digitalis, ♏iii.; aqua camphor. to ʒi. After giving six doses of each mixture the pulse rose to 50 per minute; and the patient recovered consciousness on the next morning. He then wanted some milk to drink but nothing was allowed until 12 noon, when a quarter of a seer of milk was given. Gradually his condition improved and by the next morning the pulse beat became 70 per minute, though it was still small and feeble, while the patient was quite bright and cheerful as if nothing had happened to him. The leg was washed with Condy's fluid and was covered with antiseptic dressings. The patient was discharged after complete recovery the same evening.

The points of interest in the case are the following: 1. The cobra was quite a young one, and was supposed to have the full strength of the venom, consequently the wound must have been poisoned whatever might be the dose, and yet the man survived though full two hours had elapsed before any active treatment was commenced. 2. The wound was not a typical "punctured wound" but a circular one skin deep. 3. The strong cord ligatures which the man himself had tied just after the infliction of the bite were, in my opinion, a great help, as they did not allow the poison to circulate in the system. 4. Soon after taking off the ligatures the man became so ill that his life was despaired of, and this must have been due to the circulation of the poison which had still been left in spite of the copious bleeding and the cauterisation with permanganate of potash.

I am much indebted to Mr. A. C. Brown, district medical officer of the East Indian Railway Company, for kindly allowing me to publish this case, which he has revised.

Umballa, Punjab.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

MEDICAL SECTION.

Diagnosis and Treatment of Pericardial Effusion.

A MEETING of this section was held on Feb. 22nd, with Dr. J. MITCHELL BRUCE in the chair.

Dr. SAMUEL WEST read a paper opening a discussion on the Diagnosis and Treatment of Pericardial Effusion, which will be found printed on p. 560 in THE LANCET of Feb. 26th.

Dr. D. B. LEES pointed out that the amount of fluid in the pericardium in rheumatic pericarditis was usually much less than was generally assumed: it might even be absent altogether. He considered that it was clear that the cardiac dilatation accompanying rheumatic pericarditis was mainly the result of the morbid conditions causing the pericarditis. Experimental injection of fluid into the pericardium in the cadaver could not throw any light on the physical signs of pericarditis.

Dr. W. EWART said that in the future a medical man having made out the presence of pericardial effusion would have to find out how much dilatation of the heart there was—i.e., it would be an examination within an examination.

The meeting was adjourned to March 3rd.

OBSTETRICAL AND GYNÆCOLOGICAL SECTION.

Post-peritoneal Hæmatocele complicating a Uterine Fibroid.—Modern Methods of Delivery in Contracted Pelvis.

A MEETING of this section was held on Feb. 10th, Dr. H. MACNAUGHTON JONES, the President, being in the chair.

Dr. WILLIAM ALEXANDER read an interesting note on a case of Post-peritoneal Hæmatocele complicating a Uterine Fibroid, which is published in another column.

Dr. E. HASTINGS TWEEDY read a paper on the Modern Methods of Delivery in Contracted Pelvis, in which he said that methods are now precise if they are based on an accurate knowledge of the size of the pelvis in any given case. This accuracy cannot be ensured by Müller's method, or by an estimation of the true conjugate from the size of the diagonal conjugate. Skutsch's pelvimeter, in the hands of an expert, can be made to give measurements accurate to within the sixth of an inch, and treatment should therefore be based on its findings. He divided contracted pelves into five degrees. The first four are separated from each other by half-inch measurements in the true conjugate, and the fifth degree comprises all pelves less than two and a quarter inches in the conjugate diameter. Generally contracted pelves should be considered worse by half an inch than those with simple flattening. A child of abnormally large size can pass uninjured through a normal pelvis; therefore a full-sized fœtus may pass through a contracted pelvis of the first or second degree. In contractions of the first and second degree normal delivery should be anticipated. With such contraction a woman may be expected to deliver herself naturally, and interference is only warranted when complications arise. For such cases prophylactic turnings or induction of premature labour are never indicated. In contraction of the third degree classical Cæsarean section is the operation of choice, provided the patient is seen early in labour and carries a living child. When performed under favourable circumstances it can be relied upon for the delivery of a living child, without subsequent harm to the mother, as exemplified by a total absence of omental or intestinal adhesions, by complete absorption of buried silk sutures, and an absence of visible mark in the uterus to point to the site of incision. All these signs can be verified on patients who have to undergo a subsequent Cæsarean section. When such a contraction is encountered in a woman advanced in labour, subcutaneous pubiotomy is an ideal procedure. If the special instruments required for its performance are not available, symphysiotomy yields almost as good results. With both the hæmorrhage is slight, convalescence should be uneventful and painless, the patients are able to turn themselves on the third day, and walk unaided from the seventeenth day. For contractions of the fourth degree and under, neither of these operations is to be considered, and in such cases the extra-peritoneal Cæsarean section is the operation of choice when the classical Cæsarean section is not indicated. He summed up his remarks as follows: 1. Induction of premature labour is never advisable. 2. Perforation is not permissible unless the child is dead. 3. Version should never be employed as a treatment for contracted pelvis, but may still be performed for complications of labour, such as prolapse of the cord, when associated with contractions of the first and second degree. 4. In the greater degrees of contraction time should not be wasted in an endeavour to obtain natural delivery. 5. In lesser degrees ample time should be given the woman to enable her to deliver herself, if possible. With the first appearance of fœtal or maternal distress, operative delivery must be undertaken. 6. High forceps should never be applied until preparations are complete for enlarging the pelvis, when they may be tried tentatively. 7. In all obstetrical operations the best results cannot be obtained unless gloves are worn. 8. Finally, it is only a matter of a short time before it will be considered criminal to perforate the head of a living child; and even to permit one to die because of delay in delivery, or from obsolete methods, will rightly be condemned.—In the discussion that followed, Dr. F. H. CHAMPNEYS said that there were certain propositions in the paper which were at variance with his present opinions. For instance, the induction of premature labour in suitable cases had always given him good results, while the results of symphysiotomy and pubiotomy related by Dr. Tweedy struck him as being

exceptional. Up to the present time he had treated cases of contracted pelvis by the induction of premature labour and Cæsarean section and had been well pleased with the results. He promised, however, to give the proposals of Dr. Tweedy careful consideration.—Dr. G. E. HERMAN was interested in Dr. Tweedy's commendation of Skutsch's pelvimeter; he had used the instrument but had not had much success with it. He could not agree with Dr. Tweedy in regarding the size of the child as a negligible factor; he regarded it as of much importance as the measurement of the conjugate, and had found it generally, though not always, easy to judge of the relative size of the head and pelvis by pressing the head down into the pelvic brim from the abdomen. Acceptance of Dr. Tweedy's views involved acceptance of one of two propositions: (1) that the mortality of Cæsarean section was not greater than that of delivery through the natural passages; or (2) that the life of the child was to be considered before that of the mother. With regard to the first, the most recent statistics of Cæsarean section gave a mortality of 8 per cent.; as to the second, he thought the life of the mother was always to be preferred to that of the child. Dr. Tweedy regarded the two operations for widening the pelvis—symphysiotomy and pubiotomy—as about equal in difficulty, but he could not imagine anyone acquainted with the former operation preferring pubiotomy. The real objection to methods for widening the pelvis was that for their safe use it was necessary that the relative size of the head and pelvis should be determined with great accuracy. He did not believe that the use of rubber gloves was essential for the attainment of the best results.—Dr. HERBERT SPENCER, on the question of the induction of premature labour, disagreed absolutely from the writer of the paper, and did not think that any evidence had been brought forward for pubiotomy as a substitute for induction, whatever might be said for it as an emergency operation during labour at term. He could not allow that induction of premature labour was an obsolete operation; he had been practising it for many years, and was strongly in favour of it, nor had he ever seen any bad results to the mother. He had never performed symphysiotomy or pubiotomy, preferring the induction of premature labour or Cæsarean section in clean cases. In really infected cases any of these operations, pubiotomy included, was attended with great risk to the mother. He agreed with Dr. Herman that the interest of the mother should come first; and in the interests of the child, and in many cases in the interests of the mother, too, Cæsarean section was better than pubiotomy. Dr. Tweedy had said nothing of any ill-effects to the mother, although records of such ill-effects existed in abundance. He did not think that Dr. Tweedy was justified in recommending pubiotomy as a safe and simple method of delivery for the general practitioner.—Dr. T. W. EDEN gave the results of the induction of premature labour in 101 cases at Queen Charlotte's Hospital. The time for the induction of the labour was determined by Müller's method, and he thought that this method fulfilled all the requirements. Krause's method of induction was employed, and the fœtal mortality was 13 per cent. In five-sixths of the cases the induction was performed at or later than the thirty-sixth week, and the average weight of the infants at birth was from 5 to 5½ pounds. There was no maternal mortality. Of the cases of contracted pelves which went to term 42 were delivered spontaneously, with a fœtal mortality of 4·7 per cent. In 74 cases in which the conjugata vera was 3½ inches or more, and which were delivered by forceps at term, the fœtal mortality was 18·7, and there was no maternal mortality. During the same time 35 cases were operated upon by Cæsarean section with a fœtal mortality of 11·4 per cent. and a maternal of 5·7 per cent. No doubt if the operation had been performed late in the second stage of labour the mortality would have been higher than this. Neither symphysiotomy nor pubiotomy had been performed during this period. The results of induction of premature labour compared so favourably with the alternative methods of procedure that he was not inclined to abandon the operation. Further than this it was important for teachers of obstetrics to retain and to teach the simpler methods so long as they yielded good results.—Dr. W. S. A. GRIFFITH said that Dr. Tweedy in his paper condemned in a very definite manner the British adherence to the induction of premature labour in preference to the routine operation of symphysiotomy and pubiotomy, which for many years had been extensively practised on the continent. He, personally, was satisfied that each operation had its own sphere of usefulness and was not to be condemned. He was not, however, prepared to accept the teaching that, in all cases where the fœtal head would not pass through the brim, symphysiotomy or pubiotomy was necessarily the best and, indeed, the only good method of treatment.—The PRESIDENT said that in 18 years he had had only two maternal deaths from sepsis after prolonged and neglected labour. Out of 1611 cases attended by him or his colleagues during five years 14 mothers died and 64 children—a mortality of 0·8 per cent. of the mothers and 3·9 per cent. of the children. It must always be recognised that classical midwifery among the rich and in hospitals, and among the poor were very different matters. It seemed to him essential, in order to arrive at a satisfactory conclusion as to the relation between the size of the child's head and that of the pelvis, that an anæsthetic should be given and Müller's method employed. He was strongly in favour of the induction of premature labour, and he thought that version should be employed in a certain small number of cases as an alternative to forceps; the operation should, however, be performed with the membranes unruptured and the cervix fully dilated. There was no more dangerous operation than the application of the high forceps to the head not engaged in the brim. He considered the day of perforation of a living child's head was passed. He did not think that any method of instrumental pelvimetry could ever supersede the use of the hand properly employed. He desired to convey the thanks of the section to Dr. Tweedy for his most valuable paper.

MEDICAL SOCIETY OF LONDON.

Atypical Pneumonia.

A MEETING of this society was held on Feb. 28th, Dr. SAMUEL WEST being in the chair.

Sir JOHN BROADBENT read a paper on Some Difficulties in Prognosis in Cases of Atypical Pneumonia with Prolonged Pyrexia. He said that the atypical cases he brought forward were in adults met with chiefly in association with influenza. The insidious onset, the delay in the appearance of physical signs, the intermittent pyrexia might at the outset render the diagnosis obscure, while the absence of a definite crisis, the continued pyrexia, lasting it might be some weeks, with progressive loss of flesh, would render the prognosis a matter of considerable difficulty, as in some cases empyema or malignant endocarditis might develop, whilst in others, after a prolonged period of septicæmia, recovery took place without any further complications. In children the tendency in atypical pneumonia to the supervention of symptoms suggestive of cerebro-spinal meningitis might cause undue alarm, or the vagaries of a prolonged attack of lobular pneumonia might lead to a suspicion of pulmonary tuberculosis. Broncho-pneumonia complicating enteric fever in children might also be misleading and mask the symptoms of the latter affection, which in children often ran an atypical course. He narrated the details of three cases illustrating the difficulties that might be met with in prognosis in atypical cases of pneumonia. The temperatures throughout were of an irregular type and suggested the possibility of empyema, but the repeated exploratory punctures in the cases that recovered and the post-mortem examination in the fatal case negatived this. From the pathological evidence in the fatal case it would seem that in all probability there was little reaction on the part of the tissues, and the collapsed and congested lung formed a suitable nidus for the growth of the pneumococcus which thus gave rise to a general septicæmia of prolonged duration. He next proceeded to describe cases of clinically atypical pneumonia, illustrating the septicæmic character that pneumococcal infections might assume even when the lung was primarily attacked. Three of the cases first described and others of the same type occurred during a serious influenza epidemic, and it was possible that influenza might be in many instances responsible for the atypical septicæmic type of pneumonia. The most important etiological factor in the light of pathological evidence would seem to be the absence of the usual inflammatory reaction on the part of the lung when attacked by the pneumococcus. That lowered resistance

might well be due in many instances to an attack of influenza immediately preceding. The collapsed and congested condition of the lung with the thick layer of overlying lymph found post mortem in the fatal case, tended to throw some light on the cause of the delayed resolution such as occurred in Cases 2 and 3, and was met with in analogous cases of influenzal pneumonia.

Dr. R. H. MILLER read a paper on some cases of Protracted Pyrexia in Pneumonia in Children.

Dr. W. CAMAC WILKINSON explained the advisability of clearing up the diagnosis in difficult cases in adults by the use of tuberculin.

Dr. C. THEODORE WILLIAMS said that he did not agree with the view that a reaction to tuberculin indicated tuberculosis.

Dr. G. A. SUTHERLAND discussed the difficulty of classifying pneumonias in children from hospital statistics.

Dr. WEST showed how the statements from the post-mortem room differed from the statements of the physicians working in the hospital wards. He said he was inclined to accept the clinical rather than the pathological evidence.

LIVERPOOL MEDICAL INSTITUTION.

Cardiac Syphilis.—Chronic Prostatitis.—Fat Compounds.

A MEETING of this society was held on Feb. 24th, Dr. T. R. BRADSHAW, the President, being in the chair.

Dr. THOMAS BUSHBY read notes of a case of Acute Visceral Syphilis resulting in a Permanent Cardiac Lesion. The patient had come under treatment suffering from a sloughing condition of the soft palate and serious symptoms of chest disease. He was found to be affected with mediastinitis, pericarditis, endocarditis, and right pleural effusion. He made rapid improvement as regards general condition under mercurial treatment, but as the case progressed the physical signs of marked aortic stenosis developed, with great hypertrophy of the heart.—The PRESIDENT suggested that the case might be one of infective endocarditis.—Dr. J. M. BUCHANAN considered that a cicatricial condition resulted in such cases rather than a true valvulitis.—Dr. W. B. WARRINGTON mentioned that syphilitic disease of the vessels occurred earlier than was usually imagined after the primary lesion.—Dr. E. E. GLYNN said that ten years' experience in the post-mortem room had shown the great rarity of cardiac syphilis; three true examples had been found, and in all the lesion was in the muscles in the form of gummata.

Mr. D. DOUGLAS-CRAWFORD read a note on Chronic Prostatitis. He suggested that it was a condition often overlooked or mistaken for other affections. He emphasised the importance of rectal examination in all cases of chronic urethral discharge. Prostatic massage was a valuable means of treatment. His remarks were illustrated by the relation of a number of cases.—Mr. F. T. PAUL considered Mr. Douglas-Crawford's paper a valuable reminder of the importance of this condition and mentioned a case in which apparently the gonococci had continued active for five years.—The PRESIDENT mentioned a case in which this condition simulated for a time renal disease, and Mr. RUSHTON PARKER spoke of the value of a bland, non-alcoholic dietary.

Dr. O. T. WILLIAMS read a paper on the Nature and Therapeutic Indications of the Fat Compounds. Reviewing the work done by Dr. H. Maclean and himself he showed that the fats in the body were not neutral fats but to a large extent phosphatides. This explained why fat stains had no effect on the combined fats of the tissues, such stains acting only when these bodies had been disrupted and the fat in them liberated from combination with phosphorus and nitrogen-containing groups. The various organs have various amounts of these bodies which are very unstable. The function of the liver and other organs in desaturating fatty acids was considered. The practical application of these observations was shown in a consideration of the influence of unsaturated fatty acids, such as are contained in cod-liver oil, on the metabolism, especially in phthisis. Four cases were recorded in which the administration of cod-liver oil had a marked effect on the metabolism, the fat absorption being greatly increased, as also was the nitrogen retention. The patients were able to take as much as 3 ounces of cod-liver oil without any ill-effects. These observations were carried out with Dr. C. E. P. Forsyth.—Several members spoke about the use of cod-liver oil in phthisis, the general opinion being that small doses were as beneficial as larger ones.—Dr. J. HILL ABRAM said that if the virtues of the oil were due to the fatty acids contained, the darker oils should be more useful; this had not been his experience. He advised that the oil should be given apart from meals.—After an interesting discussion and remarks by Dr. F. P. WILSON on some researches made by him, Dr. WILLIAMS, who was congratulated by the PRESIDENT, replied.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

Injuries of the Brachial Plexus.—Operation for Fractured Femur in a Child Aged Four Years.—Multiple Bone Tuberculosis Two Years after Treatment.—Fracture of Humerus.

A MEETING of this section was held on Feb. 11th, Mr. J. LENTAIGNE, the President, being in the chair.

Mr. C. A. K. BALL exhibited a young soldier who, last May twelvemonth, was driving a wagon when the horses ran away. Some canvas on the wagon fell on him and he was unable to extricate himself and became jammed between the horses. He fell on his shoulder and sustained a fracture of the base of the skull and an injury to the brachial plexus of the left arm. He had recovered completely from the fracture, but there had been no improvement in the paralysis resulting from the injury to the plexus. The lesion had been apparently localised to the fifth and sixth cervical nerves, but the nerve of Bell and the nerve to the rhomboids were perfectly normal, and the lesion must, therefore, be below the origin of these.

Mr. BALL exhibited (for Mr. E. H. TAYLOR) a patient with Complete Tear of the Brachial Plexus. The patient, a young man, aged 19 years, four months previously had become entangled in a threshing machine. A spindle had gone in above his clavicle just over the subclavian artery. He had now complete paralysis of all the muscles of the left arm, complete loss of sensation, and the subclavian artery had evidently become obliterated. It was four months since the accident and there was no sign of improvement in sensation.

Mr. H. STOKES exhibited a case of Traumatic Asphyxia and Injury to the Brachial Plexus in a young man whose coat had been caught in a revolving shaft, which wound up his clothes and collar and strangled him. He recovered consciousness 12 hours after the accident, which occurred a fortnight ago, and two days later he began to show ecchymosis of his eyes. His left arm was flaccid; there was a scar on the skin caused by the clothes. He had a certain amount of paralysis of the left arm. He had had complete loss of sensation all up the left arm, but it was now confined to the fingers.—Dr. T. G. MOORHEAD did not think there would be any use in doing a nerve anastomosis unless there was some slight reaction to the galvanic current.—Mr. W. S. HAUGHTON said his experience of immediate nerve suturing had been very satisfactory, but cases in which he had attempted suturing at intervals of five months to two years had not been satisfactory. He had tried grafting a piece of sciatic nerve from a freshly killed sheep into a man, but the result was not satisfactory.—Mr. W. I. DE C. WHEELER said it was difficult to find a good account of such cases in surgical literature, although they were fairly common.—Professor C. Y. PEARSON, Dr. W. STOKES, Mr. A. J. M. BLAYNEY, and the PRESIDENT also spoke, and Mr. BALL and Mr. STOKES replied.

Mr. WHEELER showed a child, aged 4 years, who sustained an Oblique Fracture of the Femur with marked over-riding of the fragments. Treatment by reduction and immobilisation in plaster for 14 days failed to reduce the shortening completely. A long incision on the outer side of the thigh exposed the fracture; the sharp ends were imbedded in the muscles, but extension had little effect in bringing the fractured extremities into apposition. After some difficulty the fragments were replaced and held together by the application of two Lane's plates and six screws. Three encircling aluminium-bronze wires passing through holes in the steel plates and round the oblique ends of the fracture completed the operation. Recovery was uninterrupted with no shortening of the injured limb. He

strongly advocated operation in fractures of the femur in cases where by X rays it was evident that anything like good apposition of the fragments was impossible by non-operative methods. Pain and discomfort disappear after the operation, and little or no subsequent treatment is necessary. In a child no splint need be used after the first few days. In about six to eight weeks the patient is allowed to use the limb, the joints being freely moveable by that time. Skiagrams were shown to illustrate the condition before and after operation.—Dr. W. G. HARVEY, Dr. W. C. STEVENSON, Mr. STOKES, Mr. HAUGHTON, and the PRESIDENT discussed the paper.

The PRESIDENT exhibited a case of Multiple Bone Tuberculosis two years after treatment. The case was one of tuberculosis of the wrist, elbow, and face, and of the bones of both feet. Treatment had covered about a year and had ended two years ago. The patient was completely cured of the tuberculosis, notwithstanding recent statements that such was an impossibility. He excised the wrist, which was swollen to six times the normal thickness. The different tuberculous foci were scraped and he amputated two toes. The treatment was simplicity itself and within the reach of anyone. The wrist was left somewhat stiff, but he believed it could be made much freer by massage and by forcible extension and relaxation under an anæsthetic.

Mr. HAUGHTON demonstrated a case of Oblique Fracture through the Tuberosities and Surgical Neck of the Humerus treated by Plates and Screws, and discussed the features which led him to take operative measures.

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held at Liverpool on Feb. 18th, Dr. W. K. Walls (Manchester), the President, being in the chair.—Dr. J. E. Garner (Preston) read the notes of a case in which he had removed two large Solid Ovarian Tumours from a woman, aged 28 years. She was suffering from abdominal pain and vomiting, and there was some loss of flesh. The abdomen contained much ascitic fluid, but there were no adhesions. The pathologist was of opinion that the growths were endotheliomata rather than carcinomata, and probably of secondary origin. A month later a large quantity of ascitic fluid was removed, and a solid mass could then be felt above the umbilicus. This had not been noticed at the operation. Death occurred two months after the operation.—Dr. J. H. Willett (Liverpool) showed a Uterus containing a Necrotic Submucous Fibroid which was in process of spontaneous expulsion. He had removed it from a multipara, aged 31 years, who for 12 months had had profuse menorrhagia accompanied by labour-like hypogastric pain. At one time the passage of some solid pieces of tissue had suggested to her medical attendant the possibility that the uterus might contain a mole. But on microscopical examination the pieces proved to consist of necrotic muscular tissue. There was a thick muco-purulent discharge, so total abdominal hysterectomy was performed.—Mr. R. M. Littler (Southport) reported a case of Traumatic Rupture of a Uterine Fibroid, with Intraperitoneal Hæmorrhage. The patient, a spinster, aged 43 years, had noticed a gradual increase in the size of her abdomen for four or five years. Menstruation had always been regular though scanty, and until the last three years attended with severe pain. She had not consulted a medical man. One evening she tripped and fell heavily on the asphalte walk. She was seized at once with severe abdominal pain, but was able to walk home, a distance of 100 yards. She felt very faint, vomited, and had an urgent desire to go to stool. Severe pain continued all night. Early next morning a medical man was summoned; he gave her morphia hypodermically and sent her to the Southport Infirmary, when Mr. Littler, acting on a provisional diagnosis of ruptured ovarian cyst, at once opened the abdomen. It contained a large quantity of free blood—a pint at least. A large pedunculated subserous fibroid, presenting a lacerated wound 3 inches long on its anterior surface, was quickly removed. Recovery was uninterrupted. The tumour weighed 6½ pounds. The laceration was superficial but involved a large vein.—Dr. J. E. Gemmell (Liverpool) reported: 1. A case of Pregnancy complicated by Acute Intestinal Obstruction. The patient when five months advanced in her first pregnancy was seized with abdominal pain and repeated vomiting; in 48 hours the latter was fæcal in character. The obstruction was found to be caused by a band as large as a Fallopian tube, which ran between the back of the uterus and the right broad ligament, and constricted the ileum some 6 inches from its lower end. This and some smaller adhesions were divided. The vermiform appendix was represented by a blunt stump half-an-inch in length and free from adhesions. During childhood and adolescence the patient had had several attacks of obscure abdominal illness. Labour, which had commenced before the operation, terminated the same evening. Convalescence was uncomplicated. 2. A case of Pregnancy at Seven Months, Complicated by Appendicitis. Spontaneous premature labour occurred, and the bowels, which had not been opened for seven days, acted normally next day. For three days the patient was much better, then pain recommenced, the temperature rose, and a week later a large swelling, extending from the right Poupart's ligament to the costal margin, was found. On exploration this was found to consist of a suppurating ovarian dermoid cyst below and a large appendicular abscess above. A drainage-tube was placed at each end of the wound. The patient made a good recovery.—The following specimens were also shown: Mr. A. W. Cuff (Sheffield): Ovarian Cystic Teratoma removed from a girl, aged 10 years.—Dr. A. J. Wallace (Liverpool): Three Solid Ovarian Tumours.—Mr. H. Briggs (Liverpool): A Uterus containing a Large Mushroom-shaped Adenoma, removed from a patient aged 73 years.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Feb. 15th, Dr. W. Ward-Smith being in the chair.—Dr. T. Jason Wood read a paper entitled, "Some Remarks on the Treatment of Fractures." Dr. Wood said he intended his remarks to apply only to fractures of the limbs, and after pointing out that these had assumed an added importance in recent years, owing to the operation of the Workmen's Compensation Act, in that they were frequently being asked to express an opinion as to the length of time a patient would be disabled by a fracture, he went on to say that the first essential to successful treatment was a correct diagnosis. It should never be forgotten that there might be a slight fracture in the neighbourhood of a dislocated joint which might have great influence on the prognosis of the case. The use of the X rays was of undoubted value. In setting the fracture it was of the greatest importance to avoid rotatory deformity, especially in the lower limb. In cases of impaction in the hip and shoulder joints no attempts should be made to break it down unless there were rotatory deformity or in a young patient. An impacted Colles's fracture should always be reduced. In all cases gentle massage should be commenced from the first, and after a week in a favourable case passive movement might be commenced. Ununited fractures, in which there was free mobility after prolonged treatment, were suitable for open operation, freshening up the ends of the bones and wiring in good position. In about 50 per cent. of cases even this was unsuccessful. The treatment of compound fractures under the antiseptic régime was most successful. If the wound was at all extensive it was only reasonable to suture the bones at the time. Primary operation for simple fracture was not advisable. As regards fracture of the patella, primary operation should always be undertaken in a healthy person under 50 years of age. Fracture of the olecranon should not be operated on at first as an excellent result could be obtained by ordinary methods; secondary operation could always be performed if necessary.—The paper was discussed by Dr. Ward-Smith, Dr. J. H. Rowe, Dr. R. A. R. Lankester, and Mr. F. W. Goyder.—Dr. Rowe read a very interesting paper entitled, "Some Remarks on Genius."

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY AND NOTTINGHAM DIVISION OF THE BRITISH MEDICAL ASSOCIATION.—A combined meeting of these two societies was held on Feb. 16th, Dr. A. Fulton being in the chair.—Dr. J. Martin Beattie, professor of pathology in the University of Sheffield, in a paper on the Activity of the Cells and Fluids of the Body in the Prevention and Cure of Disease, pointed out that many of the cells of the body were specially active in the destruction of bacteria, first ingesting and then digesting them. There was a corresponding leucocytosis with the introduction of bacteria, and these leucocytes became active phagocytes, and first overcame and then repaired the damage done by the bacteria. In active immunisation of an animal certain bodies were

produced which aided in the destruction of the bacteria, and in active phagocytosis it was essential that there should be a well-marked leucocytosis, so that a blood count gave important information as regarded diagnosis and prognosis. In most infective diseases a negative polynuclear leucocytosis was a very grave sign—e.g., in cases of pneumonia in alcoholics. Lantern slides, showing proliferative changes in the red marrow and also degenerative changes where *a*-leucocytosis existed, were shown. The treatment by vaccines was founded on the increased activity of the cells of the body which was produced by the injections; and Dr. Beattie suggested that salicylates in acute rheumatism might be successful because the increased leucocytosis the drugs produced acted on the organisms causing the disease. The normal body contained protective substances in small quantities, and by immunisation or vaccination these substances were increased. These substances fell under three groups: 1. Those which had with other substances a combining affinity only—e.g., antitoxins. 2. Those which not only had this combining affinity, but which, as a result of the combination, produced physical changes in the medium in which they were present—e.g., agglutinins and precipitins, &c. 3. Those which in virtue of their combination with other substances were able to bring about destructive changes—e.g., immune bodies. Therefore the rational procedure in disease seemed to be to increase these protective substances, either indirectly by stimulating the cells or directly by introducing the products of the activity of the cells.

Reviews and Notices of Books.

A System of Medicine by Many Writers Edited by Sir CLIFFORD ALLBUTT, K.C.B., M.D. Cantab., F.R.C.P. Lond., Regius Professor of Physic in the University of Cambridge; and HUMPHRY DAVY ROLLESTON, M.D. Cantab., F.R.C.P. Lond., Senior Physician, St. George's Hospital; Physician to the Victoria Hospital for Children. Volume VI.: Diseases of the Heart and Blood-Vessels. London: Macmillan and Co., Limited. 1909. Pp. 861. Price 25*s.* net.

THE contents of this volume were partly in Volume V. and partly in Volume VI. of the original edition. The present instalment further differs from Volume VI. in the first edition in not containing the Diseases of the Muscles and some of the Diseases of the Nervous System. This change possesses the convenience of having the diseases of special parts of the body inclusively considered in separate volumes.

The first contribution bears the heading Physics of the Circulation. It consists of Professor C. S. Sherrington's original introductory article on Cardiac Physics, which appeared in the former edition, revised by Dr. James Mackenzie, who has added an account of the peripheral circulation, including arterial blood pressure. His remarks on "the peripheral resistance to the heart" will well repay perusal. He points out that the main portion of the work of the heart is expended immediately, not on moving the blood through the vessels, but in stretching the arterial wall. The elasticity of this wall is therefore of importance in the physical action of the heart, and this factor should be constantly borne in mind in clinical work. Dr. Mackenzie gives a good account of the methods of estimating arterial pressure, and in referring to the ordinary manner of feeling the pulse he says: "The results obtained by digital examination cannot be expressed in terms of mathematical formulæ, nor in language that conveys the exact impression to other minds; nevertheless, to the experienced observer the information is invaluable, and cannot be acquired by any further procedure." We believe this opinion will be endorsed by most physicians.

Dr. Frederick T. Roberts has thoroughly revised the article on Diseases of the Pericardium. The effects of pericarditis on the heart structure are more fully set forth, and the views held by various observers as to the occurrence of myocardial lesions in connexion with pericarditis are discussed at length. In support of the theory that myocardial changes are believed to constitute the most important factor in an individual case of rheumatic carditis in early life Dr. F. J. Poynton's investigations are quoted; he has demonstrated that the changes in the heart-walls commence by numerous scattered foci, some of them far from the pericardium, and that they are general, involving also the interstitial tissues. He attributes them to the action of toxins derived from micro-organisms gaining access through the circulation. The coronary arteries may be the seat of acute arteritis or other infective lesions; and Dr. Roberts draws attention to the suggestion that has been made, that pressure on these vessels by inflammatory lymph might cause degeneration of the myocardium by impeding the normal supply of blood.

The article on Diseases of the Myocardium by Sir R. Douglas Powell has been revised, and in his contribution on Angina Pectoris numerous alterations have been made. Some elemental considerations have been introduced which aid in the elucidation of the subsequent remarks, and the author's classification of cases of angina pectoris is more fully explained. The pathology of the condition known as angina pectoris vasomotoria has been largely rewritten and the effects of nicotine upon the small vessels and heart are carefully discussed. A table has been included giving an instructive comparison between the main features and tendencies of vaso-motor angina and those of spasmodic asthma. Several additions have been made to the remarks on primary cardiac angina. In discussing the mechanism of angina Sir R. Douglas Powell points out that restricted supply of arterial blood has long been recognised as a cause of cramp in skeletal muscles, and affects by choice those muscles which are most in use. In cases of anginal seizure there is frequently a history that the first seizure occurred while walking faster or more laboriously than usual, and that subsequently less effort was sufficient to bring on an attack. In such cases the factors are probably the same as in those of cramp in the leg muscles—namely, restricted irrigation of the heart through contraction of its arterial supply, impaired removal of waste products, cramp, or paralysis. A discussion on this subject has recently taken place in our columns, which indicated the various opinions held by different observers.

An entirely new article on Stokes-Adams Disease has been contributed by Professor W. Osler and Dr. A. Keith. The pathology of heart-block and its bearing on cases manifesting the Stokes-Adams syndrome are fully considered. The conditions which may affect the auriculo-ventricular junctional system have only been comparatively recently studied, but Dr. Keith has collected observations on 21 hearts. The pathological lesions are divided into five groups, and these are described in detail. Briefly mentioned they are as follows: (1) the system has been broken by a gumma; (2) the system was partly fibrosed evidently as the result of arterio-sclerosis; (3) the bundle was implicated in fibrous or cicatricial tissue, probably from rheumatic endocarditis; (4) the system was the seat of fatty infiltration; and (5) the system was injured by an acute infection. The question of heart-block is an involved one and opens a large field for research. A good account of the clinical phenomena which are observed is given by Professor Osler.

The article on Mechanical Strain of the Heart by Sir Clifford Allbutt has been rewritten, and now bears the title Over-Strain of the Heart, and contains a section by Dr. R. W. Michell, the outcome of his special opportunities of watching University athletes. His remarks on the pulse-rates are particularly interesting. He says that the points which stand out most prominently, as the men are followed through the years of their healthy athletic lives, are: (1) the

progressive reduction in the frequency of the pulse; (2) the progressive increase, in each succeeding year of residence, in the percentage of men who show this reduced pulse-rate; (3) the progressive decrease in the difference between the frequency of the morning pulse-rate, before exercise, and the evening, after exercise; and (4) the gradual increase in the size of the left ventricle. Dr. Michell then proceeds to give the indications of overwork, the earliest sign of which is a rise of the pulse-rate in the morning after exercise. Experience has taught him that it is impossible to exaggerate the importance of the observation that the heart is "spacing"; it means that rest is imperative, and if it is not taken other signs will appear, which signify that the case is passing out of the class of wearied hearts into that of "strained" hearts.

Dr. T. M'Crae (Baltimore) has revised the late Professor Dreschfeld's account of Acute Simple Endocarditis, and the more modern views on the subject have been duly incorporated. Several additions have been made in the article on Congenital Diseases of the Heart by Dr. Laurence Humphry. The section on cardiac signs has been considerably amplified, and the physical signs of stenosis of the pulmonary artery, of coarctation of the aorta, and of patent ductus arteriosus are described at greater length.

The article on Diseases of the Mitral Valve, by the late Dr. A. E. Sansom, has been brought up to date and more fully illustrated by Dr. G. A. Gibson. It is very properly pointed out that although for purposes of convenience obstruction of, and regurgitation at, the mitral orifice are considered separately, it must be borne in mind that, excluding functional incompetence, in the great majority of instances both disorders are present. There are, it is true, a certain number of patients who, at any rate for a time, furnish absolute evidence of mitral obstruction without accompanying incompetence, but even in these instances regurgitation is almost certain to appear sooner or later. Incompetence, on the other hand, may be produced by causes and lesions which, from first to last, exert no influence upon the course of the blood from the auricle to the ventricle. In considering any individual case it is important that these considerations should be borne in mind. An excellent description is given of the auscultatory phenomena met with in mitral stenosis, attention being especially drawn to the modifications of the second sound. The use of the cardiograph has afforded evidence of some importance in the elucidation of certain problems connected with mitral obstruction, and Dr. Gibson dwells on this subject at some length.

Diseases of the Aortic Area of the Heart are described by Sir Clifford Allbutt. Some interesting cases have been added illustrating the effects of strain or violence in the production of aortic disease. In discussing the sounds of the heart as heard in cases of aortic regurgitation the investigations of Ferramini are discussed, the results of whose researches seem to be that the degree to which the second sound persisted was inversely to the insufficiency. The suggestive and instructive account of Functional Disorders of the Heart has been largely rewritten by Sir Clifford Allbutt.

The description of Diseases of the Blood-vessels and Lymphatics occupies six chapters as follows: Arterial Degenerations and Diseases, by Dr. F. W. Mott; Aneurysm, by Professor W. Osler; Phlebitis, by the late Mr. H. H. Clutton; Thrombosis and Embolism, by Professor W. H. Welch, revised by Dr. H. D. Rolleston (two chapters); and Diseases of the Lymphatic Vessels, by Dr. H. D. Rolleston. The article on aneurysm is a new one; the remarks on treatment are noteworthy as indicating the present opinion held by physicians. After a survey of the principles on which therapeutic measures in regard to aneurysm are founded, the author is forced to the conclusion that rest is the important element, and that in suitable cases the triple measures—rest, diet, and iodide of potassium—should be given a thorough trial. In the cases which come under observation late with large sacs, a symptomatic plan of treatment should be followed.

The present volume contains a vast amount of information in connexion with diseases of the heart and blood-vessels. As a separate work of reference it is one of great value, while it forms a worthy addition to the "System," which now holds a high place in medical literature upon which Professor Allbutt and Dr. Rolleston may be heartily congratulated.

Studies in Immunity. By Professor JULES BORDET, Professor of Bacteriology at the University of Brussels, Director of the Pasteur Institute of Brabant; and his Collaborators. Collected and translated by FREDERICK P. GAY, A.B., M.D., Instructor in Pathology, Harvard Medical School. London: Chapman and Hall, Limited. New York: John Wiley and Sons. 1909. Pp. 545. Price $6, or 25*s.* 6*d.* net.

IT appears to be the fashion for writers on immunity to issue their contributions to this difficult subject in collected form, and if the fashion be admitted to be a good one no one can claim a better right than Professor Bordet to conform to it. His leading position in this field of research must be generally admitted, and the influence which he has exerted has been very great. The present collection is made and the articles are translated by his collaborator, Dr. Gay, whose name is well known in connexion with that of Bordet and some of whose papers on immunity appear in this volume. A general review of the subject of immunity has been written by Bordet especially for this book, but with the admission that there still exist too extensive gaps in our knowledge to make a comprehensive theory at present possible. He criticises the fascinating hypotheses put forward by Ehrlich and points out many instances in which physical reactions are exhibited by colloid substances very similar to some of the phenomena of agglutination and the like. He regards the fixation of alexine or complement by sensitised corpuscles as a phenomenon of adsorption. He also points out the marked alterations produced in an organism by cultivation on different media, so that a bacillus grown on blood-serum and on agar respectively produces by injection into animals a serum agglutinative of the particular culture used but not of that from the other medium. Of the papers included in the book space forbids us to give much more than an enumeration of the titles. The first paper is devoted to adaptive changes of bacterial cultures in the bodies of immunised animals whereby the weaker organisms are killed out and the virulence of the remainder thus appears to be increased. Chapters II. to V. deal with the properties of the serum of vaccinated animals and emphasise the importance of the leucocytes in immunity. Chapters VI. to VIII. are devoted to the problem of agglutination, showing the resemblance of this phenomenon to hæmolysis and the important part played in it by salts. In Chapter IX. is discussed the question of the unity or plurality of alexines and the nature of hæmolysis in general; and in Chapter XI. the same problems are treated of in relation to cytolysis. Chapter X. by Bordet and Gengou is on the nature of sensitising substances in anti-microbial serums; and papers by Gengou occupy Chapters XII., XV., XXII., XXV., and XXVI., dealing with the sensitising substances in serum active against albuminous substances, with certain properties of colloids and with molecular adhesion which may have a bearing on the phenomena of agglutination, and with the special

sensitising substances which are formed against the tubercle bacillus; and another paper on this last subject is contributed by Bordet and Gengou in collaboration. The translator, Dr. Gay, writes on the single nature of hæmolytic immune bodies and on complementoids, on fixation and deviation of alexine, and in collaboration with Bordet on absorption of alexines and on the relationship between these bodies and the sensitising substances (Chapters XVI. to XIX. and XXI.). Chapter XX. is by Dr. J. G. Sleeswijk, and deals with the nature of opsonins, which may apparently be identical with either the sensitising substance or the alexine. In Chapter XXIII. Bordet and Streng deal with the phenomena of adsorption and the conglutinin of bovine serum; and Chapters XXVII. to XXIX. are devoted to the bacillus of whooping-cough. In Chapter XXX. Bordet records his researches on avian diphtheria, and the concluding chapter contains the *résumé* of the whole subject of immunity, to which we have already alluded.

Bordet's work is too well known to students of immunity to need commendation to them. The general reader who is interested in these matters will find the subjects here treated with admirable lucidity and in a manner that is not too technical for comprehension. The translator has done his work well and is to be congratulated on the volume which he has produced. The printing and paper are satisfactory and there is an adequate index.

Archives of the Middlesex Hospital. Clinical Series No. 3, being the Seventeenth Volume of the Archives. London: Macmillan and Co., Limited. November, 1909. Pp. 136.

THIS number contains: 1. A Lecture on Tubal Pregnancy, by John Bland-Sutton. The pathology of this condition is described in an interesting and lucid manner, and some admirable illustrations are given. 2. A Note on Two Cases of Total Removal of the Vagina, Uterus, and Appendages by Paravaginal Section, by Comyns Berkeley and Victor Bonney. The operation was devised by Schauta and has been but rarely performed in England. The two cases described in this note were both examples of carcinoma of the body of the uterus with vaginal metastasis. 3. Clinical Notes on Diseases of the Nervous System: Some Disorders of Gait, by H. Campbell Thomson. 4. Some Notes upon Abdominal Emergencies, by W. Sampson Handley. Some valuable hints are given in regard to the diagnosis of these cases and the decision as to whether operative measures shall be adopted. Mr. Handley inveighs strongly against the use of opium before a diagnosis is made. 5. Two Cases of Intestinal Abscess Pointing in the Upper Part of the Right Thigh, by Gordon Taylor. In one of these an appendix abscess led to involvement of the psoas muscle and pointed in the thigh, in the other a sinus was present in Scarpa's triangle leading to a Richter's hernia in the right femoral canal. 6. On the Nature, Prevention, and Treatment of Shock, by A. E. Johnson. 7. The Sensory Disturbances in Heart Disease, by Otto May. This paper contains an interesting analysis of the sensory disturbances in 50 patients suffering from heart disease and a discussion of the mechanism of cardiac pain and tenderness. Dr. May concludes that there is some factor concerned in its production other than the purely mechanical one, which is usually regarded as the cause. 8. Actinomycosis of the Vermiform Appendix, by Cecil Rowntree. 9. The Operative Treatment of Uterine Retro-displacements, by Frank E. Taylor.

This number also contains the reports of the Medical, Surgical, and Obstetric Registrars and of the Pathologist for the Year 1908.

LIBRARY TABLE.

The Royal London Ophthalmic Hospital Reports. Edited by WILLIAM LANG, F.R.C.S. Eng. London: J. and A. Churchill. Vol. XVIII., Part I., January, 1910. Price 5*s*.—The contents of this number of the Ophthalmic Hospital Reports are: 1. Diseases of the Lymphoid Tissue of the Conjunctiva, by E. Treacher Collins. The contagious nature of trachoma is very clearly shown. The pathology is discussed. Radium treatment did not prove very encouraging in his hands. He thinks copper sulphate the most serviceable agent in effecting the removal of follicles which cannot be removed by expression. 2. A case of Obstruction of the Central Vein and Glaucoma, with remarks, by Dr. Tatsuji Inouye (Tokyo), with two plates which display the conditions well. 3. Retinitis Circinata and its Relation to Other Forms of Retinitis with Hæmorrhages and Exudates, by J. Herbert Fisher. 4. Cyst of the Pigment Epithelium of the Iris, by Claud Worth, illustrated by a chromo-lithographic plate. 5. Rupture of the Lamina Cribrosa, by Malcolm L. Hepburn, with two plates. 6. Three cases of Post-operative Infection, by Ilbert Hancock. 7. Teratoma of the Orbit, by R. J. Coulter and G. Coats, with five plates. 8. The Choroidal Blood-supply of the Retina, by Malcolm L. Hepburn. 9. A Clinical Study of Posterior Traumatic Cataract, by A. C. Hudson.

Transactions of the Ophthalmological Society of the United Kingdom. Vol. XXIX. Pp. 330. Price 12*s*. 6*d*. net. 1909. London: J. and A. Churchill.—This volume of the Transactions of the Ophthalmological Society of the United Kingdom fully maintains the excellence which we are accustomed to expect. The outstanding feature is Mr. Edward Nettleship's Bowman lecture on Some Hereditary Diseases of the Eye. It is a lengthy *résumé* of the author's well-known work on the subject, running to 89 pages of text, with 60 pages of appendices in small print. Its value in a field which Mr. Nettleship has made peculiarly his own cannot be overestimated. Both he and the society which he was instrumental in founding are honoured by his delivery of the Bowman lecture and by his acceptance of the medal founded in his name and conferred upon him for his work on heredity. The volume contains several other papers illustrating inheritance or familial incidence of eye diseases—cataract, ectopia lentis, aniridia, and so on. Among the more striking communications are a case of Dipterous Larva in the Anterior Chamber, by Mr. F. G. Thomas and Mr. J. Herbert Parsons; a case of Orbital Abscess following Retinal Embolism, by Mr. A. L. Whitehead; a case of "Massive Retinal Exudation," by Dr. David J. Wood, and another case of the same nature, by Mr. A. Hill Griffith and Mr. A. W. Ormond; and a case of Pituitary Neoplasm in a child, by the late Mr. Ilbert Hancock. In an admirable paper on Congenital Anterior Staphyloma Mr. E. Treacher Collins warmly espouses the developmental theory of origin of the condition. The application of zinc ionisation and radium therapy to diseases of the eye is exemplified in cases reported by Mr. L. V. Cargill and by Mr. J. Mackenzie Davidson and Mr. Arnold Lawson respectively. Many cases of great interest and communications on subjects of theoretical and practical importance add to the value of a worthy contribution to the literature of ophthalmology.

Manual of Military Ophthalmology. By M. T. YARR, F.R.C.S. Irel. London and New York: Cassell and Co., Limited. 1909. Pp. 228. Price 6*s*.—This manual, specially adapted to the use of medical officers of the Home, Indian, and Colonial Services, has reached a second edition and thereby demonstrated its utility. It is excellently suited for its purpose. Though a few slight errors have crept in and there are some statements which those with wide ophthalmic

experience might be inclined to take with a grain of salt, Colonel Yarr's teaching is in all essentials quite reliable. The chapters on tropical eye diseass, including those associated with malaria, trachoma, and injuries of the eye, may be mentioned as specially worthy of consideration. The book is not intended to replace more exhaustive text-books or practical experience, but it is a useful and trustworthy guide for members of the services who, without special training, are called upon to deal with eye diseases.

Atlas of External Diseases of the Eye for Physicians and Students. By Dr. RICHARD GREEFF. London: H. K. Lewis. 1910. Pp. 140. Price 42*s.* net.—It has seldom been our lot to examine a more gruesome series of plates than those contained in this volume. Disease is often repulsive, but the repellent features are unnecessarily exaggerated in these coloured reproductions of wax models, each framed in white, irresistibly reminiscent of the charnel house. We are not altogether favourably disposed towards atlases of external diseases, though we admit that they have their great uses. Verisimilitude is not always attained, however great pains may have been taken, and there is a temptation for the student to rely on the plates instead of making himself thoroughly acquainted with the diseased conditions themselves. We cannot consider this work as an advance upon its predecessors in the same field.

Annals of Ophthalmology. Editor, W. T. SHOEMAKER, M.D., Philadelphia; Associate Editor, C. W. PARKER, M.D., St. Louis, Mo. Vol. XIX. No. 1, January, 1910. St. Louis, Mo.: Jones H. Parker. Annual subscription, 18*s.*—This number reproduces a good photograph of the late George C. Harlan, M.D., a well-known ophthalmic surgeon of Philadelphia and a former president of the American Ophthalmological Society, and contains the following articles, besides numerous excerpts from continental works on ophthalmology. 1. A translation by Clarence Loeb, M.D., of St. Louis, of an article on the Physiology of Pupillary Movements, published in the July number of the *Archives d'Ophtalmologie*, 1909, by Dr. Charles Lafon. 2. Transferred Ophthalmitis, by Charles A. Olivers, M.D., of Philadelphia. 3. The Visual Requirements of Transportation Employés, by Nelson Miles Black, M.D., of Milwaukee, Wis. This article deals chiefly with the distance and colour vision of signalmen, engine-drivers, look-out men, and flag-lieutenants. 4. The Relief of Glaucoma through Subconjunctival Injections of Sodium Citrate, by Hayward G. Thomas, M.D., and Martin H. Fischer, M.D., of Oakland, California. 5. Do Diseases of the Accessory Sinuses cause Keratitis Parenchymatosa? by Edward J. Bernstein, M.D., of Kalamazoo, Michigan. 6. Report of a case of Parinaud's Conjunctivitis with Unusual Complications, by Frederick Krauss, M.D., of Philadelphia, and M. P. Boyle, M.D., of Glenside, Pa. 7. Modified Knapp Roller for Expression in Trachoma, by W. Norton Whitney, M.D., of Tokyo, Japan.

Open Air at Home or Continuation of Sanatorium Treatment. By STANLEY H. BATES. With Introduction by Sir JAMES CRICHTON-BROWNE, M.D. Edin., F.R.S. Bristol: John Wright and Sons; London: Simpkin, Marshall, Hamilton, Kent, and Co., Limited. 1910. Pp. 62. Price 2*s.* 6*d.* net.—This little book is warmly commended by Sir James Crichton-Browne in his introduction and we can entirely endorse his commendation. Mr. Bates is a layman who underwent a successful "cure" in a sanatorium for tuberculosis, and who continued his treatment in his garden at home. He erected a shelter which after sundry trials he managed to get as near perfection as is possible in this world, and in this shelter he lived and worked for three years. Mr. Bates lays great stress on the fact that the medical expert is the person who must be obeyed, and "the question whether and to what extent a patient may carry out the open-air treatment on the lines described in this book must be one for the doctor to decide." The book is simple, practical, and sensible.

The Dietetic Treatment of Diabetes. By B. D. BASU, Major, I.M.S. (retired). Allahabad: The Panini Office. 1909. Pp. 52. Price 1 rupee 8 annas.—Over 700 years ago that learned man John of Salisbury wrote concerning the "theoretical" physicians of his day: "With all my admiration I am much troubled at one thing, and that is that they are so singularly at variance in their discussions and in the opinions which are drawn from them. For this one thing I do know, that contraries cannot both be true at one time." And in these modern days much the same may be said as to the proper diet for diabetics. For when all is said and done we know but little more as to the pathology of diabetes than did the mediæval physicians, despite the light thrown by Bernard upon the glycogenic functions of the liver. As to treatment, all are agreed that regulation of the diet is important. But all are not agree das to what shape this regulation should take. Many physicians now allow a certain quantity of carbohydrates with benefit to their patients. Major Basu's thesis is that the inhabitants of India, who in many cases eat no meat even when they do suffer from diabetes, have it in a very chronic form, and his little book is a plea for allowing carbohydrates, which are best taken together with fat in some form. He gives a variety of grains, seeds, and nuts which are used in India, and puts forward a strong plea for the use of the cocoa nut. Cocoa nuts in this country cannot, of course, be obtained in the same condition as they can be in India, but even so they might form a desirable variation in the monotonous diet of the diabetic. Major Basu's interesting little book will be found useful to medical men, who are often sorely taxed to devise an acceptable diet for their diabetic patients. Diabetes is above all a disease in which every case must be treated on its merits, for a diet which succeeds with one patient will frequently do another harm.

Pharmacopedia: a Commentary on the British Pharmacopœia, 1898. By EDMUND WHITE, B.Sc. Lond., F.I.C., and JOHN HUMPHREY. Second edition. Illustrated with 46 plates. London: Simpkin, Marshall, Hamilton, Kent, and Co., Limited. 1909. Pp. 697.—This is a very useful book to the student of the Pharmacopœia, inasmuch as it sets forth in the light of recent knowledge "the nature and composition of substances to be used in medicine." This last expression we quote from the British Pharmacopœia itself, but as everyone must admit "the nature and composition of substances to be used in medicine" do not form in that work a complete story, and hence the value of a work in which "the official descriptions of drugs are amplified and the tests explained." So far as we have examined the practical sections of the work, and they obviously occupy a very large share of the pages, there can be little doubt, we think, that they will give assistance to pharmacists and others to whom "descriptions and tests" are of importance. In this connexion the "Pharmacopedic Atlas" at the end of the volume may be particularly commended, which contains a large number of illustrations of crude drugs and microscopical sections. The drawings are very well done, the characteristic markings and forms of leaves, barks, roots, with transverse sections, being particularly well defined. The analytical sections, which are directed to the estimation of definite substances, give evidence of the writers being in touch with recent advances in volumetric and gravimetric analysis. The work deals with the official medicaments only, the authors regarding a supplement on non-official substances as unnecessary in view of the publication of the British Pharmaceutical Codex, which deals with these on the lines indicated.

JOURNALS AND MAGAZINES.

Centralblatt für Allgemeine Pathologie und Pathologische Anatomie. Band XXI. No. 1, Jan. 15th, 1910; No. 2, Jan. 31st.—No. 1 contains:—1. A paper by Professor Julius Arnold of Heidelberg entitled "Do the Cells of the Bone Marrow, especially the Eosinophiles, contain Glycogen?" By means of various reactions, including Best's carmine stain, the presence of glycogen is established in the eosinophile, pseudo-eosinophile cells, and in some leucocytes in the bone marrow of various animals and in that of children dying from certain acute affections. 2. A paper on Comparative Researches into the Micro-chemical Reaction for Iron in Human Livers, by Dr. Jasuyoshi Nishimura of Tokyo. The methods in use for demonstrating iron in tissues were critically examined, especially the ammonium-sulphide and the Berlin-blue methods. Dr. Nishimura found the former more reliable, but owing to the colour obtained the iron is more difficult to differentiate from other pigments. He therefore worked out a method by which the iron was first fixed by ammonium sulphide and subsequently stained blue by the other method. Professor Kaiserling, under whose supervision the work was carried out, appends a note on the paper and refers to the recent work of Hueck on the same subject, in which similar results were obtained.——No. 2: 1. Dr. Walter Fischer of Freiburg contributes a paper on Foreign-Body Giant Cells in Amyloid Disease of the Spleen. Giant cells induced by amyloid degeneration are known to occur in other regions. Dr. Fischer found them abundantly present in the amyloid spleen of a woman aged 68 years, dead from putrid bronchitis and bronchiectasis. The giant cells were of the "foreign body" type with numerous nuclei, for the most part collected at one pole. The cells are regarded as resulting from the irritation of the connective tissue induced by the foreign body, and not necessarily as an attempt at removal or of repair. 2. Dr. Josef Kyrle of Vienna contributes a paper dealing with the Interstitial Cells of the Human Testis. The origin and functions of these cells have been much discussed. Dr. Kyrle, on the strength of his examination of the testes of a four-year old boy, believes that they promote and assist the development of the epithelium of the seminiferous tubules.

The Archives of Internal Medicine. Vol. V., No. 1. Jan. 15th, 1910. Chicago: American Medical Association.—The contents of this number are: 1. Chronic Passive Congestion of the Liver, by Dr. Channing Frothingham, Junr., of Boston. He finds that uncomplicated chronic passive congestion of the liver, even in cases of long standing, does not necessarily lead to atrophy and disappearance of liver cells, although these changes often occur. Hæmorrhagic necrosis of the liver is a very frequent complication of chronic passive congestion of that organ, but probably occurs only in cases with cardiac insufficiency. 2. Chronic Aleucæmic Enlargement of the Lymphatic Glands, by Dr. C. W. Duval of New Orleans and Dr. C. P. Howard of Montreal. They record a case of the type usually referred to as Hodgkin's disease, with the histological characters described by Fischer, Reed, and Longcope. They deprecate the use of the term Hodgkin's disease, and conclude that the most suitable name would be "granuloma cryptogeneticum." 3. Various Forms of Experimental Arterial Disease in the Rabbit, by Dr. Miner C. Hill of New York. He finds that spontaneous arterial disease in the rabbit is a factor to be reckoned within this connexion. In 210 presumably normal rabbits such lesions were found in 15 per cent. The common type of these lesions could not be distinguished histologically from that due to adrenalin. Such spontaneous lesions apparently explain the results formerly ascribed to single injections of adrenalin. 4. Three cases of Addison's Disease, one with Adrenal Transplantation, by Dr. F. C. Busch and Dr. Thew Wright of Buffalo, N.Y. They found little benefit from treatment with adrenal preparations, but they regard their results from transplantation as "far from discouraging." 5. The Total Energy Requirement in Diabetes Mellitus, by Dr. Eugene F. Dubois of New York, and Dr. Borden S. Veeder of Philadelphia. They record their observations on patients in the Pettenkofer-Voit Chamber, from which they conclude that the total energy requirement of cases of diabetes does not vary from the normal. They suggest that in addition to the 31–35 Calories per kilogramme required for the normal individual at rest the diabetic should be given enough extra Calories to cover the loss of sugar in the urine. 6. Syphilis of the Thyroid, by Dr. Benjamin F. Davis of Chicago. Details are given of a case with a description of the pathological changes found. An analysis of the cases previously recorded is also given. 7. The Peculiarities of Nitrogenous Metabolism in Pernicious Vomiting of Pregnancy, by Mr. Frank P. Underhill and Dr. Richard F. Rand of New Haven. They criticise the views of some other observers that there is evidence of sub-oxidation or deficient desamidation in this disease and suggest that the urinary changes are induced by the accompanying inanition. They believe that in such cases the administration of energy-yielding food-stuffs is of greater value than giving food rich in nitrogen.

Ophthalmology. Vol. VI., No. 2, January, 1910. Edited by H. v. WÜRDEMANN, M.D., assisted by a numerous staff of American and foreign ophthalmologists. Quarterly journal, published in England by George Keener and Co., 16A, Red Lion-square; in the United States at 411, The White Building, Seattle, Washington. Price, per annum, £1 3*s.*—The original articles contained in this number are the following: 1. A Study of Heterophoria and Heterotropia, by Edward Lauder, M.D., Cleveland, Ohio. 2. Demonstration of the Size and Position of the Angle Alpha by a Simple Modification of the Javal-Schiötz Ophthalmometer, by Dr. Lucien Howe, Buffalo, N.Y. 3. Mixed Astigmatism with Meridians of Astigmatism not crossing at Right Angles, by Waten L. Pannell, M.D., New York. 4. A Pocket Ophthalmoscope, by J. Herbert Claiborne, M.D., New York. 5. A New Skiascope, by Clinton T. Cooke, M.D., Seattle. 6. A Case of Temporary Monocular Amblyopia, possibly due to Embolus in the Optic Nerve, by Howard F. Hansell, M.D., Philadelphia. 7. Some Clinical Observations upon Sympathetic Ophthalmitis, by Dunbar Roy, M.D., Atlanta, Ga., with three figures. 8. Visible Movement of Blood in Retinal Vessels, by G. S. C. Nagel, M.D., San Francisco, Cal. 9. Massage as an Occupation for the Blind, by L. Webster Fox, M.D., Philadelphia, Pa. 10. Conjunctival and Other Reaction Tests to Tuberculin, by Charles A. Olivers, M.D., Philadelphia. He strongly recommends them for diagnostic purposes. 11. Remarks on the Tuberculin Treatment of the Eye, by Dr. Junius, Köln, Germany. 12. Injury to the Eye from the Presence of Anilin Pencil in the Conjunctival Cul de Sac, by Albert C. Snell, M.D., Rochester, N.Y. 13. Transfixion of Cornea by Hatpin without Injury to Lens, by Alfred G. Bennett, M.D., Buffalo. 14. Preliminary Note on Increased Intra-ocular Tension met with in cases of Epidemic Dropsy, by Lieutenant-Colonel F. P. Maynard, I.M.S., Calcutta. 15. Obituary Notice, with portrait, of George Cuvier Harlan, M.D. There are in addition numerous abstracts from English and foreign works on ophthalmology.

THE MEDICAL GRADUATES' COLLEGE AND POLYCLINIC.—The annual general meeting of the Medical Graduates' College and Polyclinic will be held at 22, Chenies-street, London, W.C., on Friday, March 11th, at 5.15 P.M.

Reports and Analytical Records
FROM
THE LANCET LABORATORY.

(1) LEUCOFERMANTIN; AND (2) FIBROLYSIN GUTTAPLAST.
(E. MERCK, 16, JEWRY-STREET, LONDON, E.C.)

1. Leucofermantin is described as a normal animal serum, the antiferment property of which has been so far increased as to correspond at least to the anti-tryptic index of normal blood serum. Its therapeutic application is indicated in inflammatory processes accompanied by suppuration and fermentation in which it is desirable to prevent an extensive and dangerous destruction of tissue. Clinical trials are reported which are in favour of the use of leucofermantin in suppurative processes leading to abscess formation. Its therapeutic effect is marked in suppuration of the tendon sheaths and in abscess of the eyelid. Leucofermantin is applied to open suppurative foci by simply pouring it into the cavity. Otherwise a small incision is made and the anti-ferment injected preferably after draining the abscess by means of an aspirator. The serum is said to be free from harmful secondary effects and incidentally it is mentioned that leucofermantin has been successfully employed in diabetes. 2. Fibrolysin, which consists of thiosinamin (oil of mustard in an alcoholic solution of ammonia) and sodium salicylate, has been used intramuscularly and hypodermically, and intravenously in the treatment of pathological scar tissue. It has been suggested that in the form of plaster fibrolysin might be suitable for external application in some cases of keloids, and superficial scars and tumours which are covered only with a thin layer of epithelium. The plaster is said to be useful in the treatment of X ray dermatitis, promoting the absorption of superfluous pathological tissue when applied to wounds during the healing process.

DIABETIC RASPBERRY JAM.
(CALLARD AND CO., 74, REGENT-STREET, LONDON, W.)

We are able to agree with the statement in regard to this special food preparation that it does not contain more than 2 per cent. of sugar. On extracting the jam with 75 per cent. alcohol the total sugar obtained amounted to 1·90 per cent. Whilst the attractive flavour of the raspberries is preserved it is somewhat marred by the rawkishness of the glycerine present. Physiologically the preparation is sound, having regard to the special purpose for which it has been designed, but it is not very attractive. However, a safe addition to the diabetic diet is always useful where monotony has to be avoided.

PORTURTLE.
(STEVENS BUER AND CO., 27, MINCING-LANE, LONDON, E.C.)

This wine is stated to be made from Oporto wine and genuine turtle. We have examined it in regard to its nitrogenous constituents, with the result that we found that 0·44 per cent. of protein was present. Chemical analysis is powerless to say what is the source of this protein. In view of the definite amount of protein present there can be no doubt that the wine is to some extent nourishing besides stimulating.

PANKREON.
(WIDENMANN, BROICHER, AND CO., 33, LIME-STREET, LONDON, E.C.)

We have examined pankreon on a previous occasion, when we were able to confirm that its digestive action is secured in the duodenum whilst it passes through the gastric area unimpaired. In other words, pankreon begins to digest as soon as it reaches an alkaline environment. Its resisting action to the gastric juice is due to the ferment being combined with a tannin albumin compound. Further, it is conceivable that the tannic acid present tends to prevent intestinal putrefaction. Our tests *in vitro* showed that in a weak alkaline solution, in spite of the presence of alkaline tannates, insoluble proteins were hydrolysed. Recent reports state that pankreon has been found to be of distinct service in the relief of gastric migraine.

TROMMER'S ELIXIR.
(THE TROMMER CO., LIMITED, 27, CHARTERHOUSE-SQUARE, LONDON, E.C.)

This is a powerful formula in regard especially to the assistance which it is likely to give to healthy metabolism. It contains the active enzymes of malt, glycerophosphates, and what is described as the alkaloidal extractives of cod livers. Putting aside the question as to whether alkaloidal extractives of cod livers are of any therapeutic value, especially having regard to the fact that the value of cod liver oil is very generally ascribed to the facility with which it is absorbed and digested, we were able to obtain evidence of the presence of biliary acids. Thus an acid ether extract of the elixir gave a residue which on treatment with glucose-sulphuric acid gave a play of colours resembling the Petenkofer reaction for bile salts. Further experiments showed a decided digestive action of the preparation in regard to starch. The presence of glycerophosphates was also confirmed. The preparation is probably of value chiefly in cases of malnutrition.

VALEROBROMINE (LAGRAND).
(GUYOT-GUENIN AND CO., 67, SOUTHWARK BRIDGE-ROAD, LONDON, S.E.)

The claims in regard to the therapeutic advantages of valerobromine are simple. In the first place, the valerianates are unpleasant to take and have a disagreeable odour; in the second, what is known as "bromism," manifested in gastric disturbance, cutaneous eruption, and mucous catarrh, is known to be frequently a sequel to the administration of ordinary mineral bromides. Valerobromine presents an organic combination of the two constituents, the actions of which it is stated are complementary and their individual drawbacks are mutually eliminated. We had no difficulty in recognising the presence of both valeric acid and bromine, and the latter was certainly in organic combination. The indications of valerobromines are in neurasthenia, epilepsy, insomnia, and nervous disorders generally. Valerobromine is a sodium salt or bromovalerianate, which is a crystalline substance soluble in water.

THIOCOL.
(THE HOFFMANN LA ROCHE CHEMICAL WORKS, 7 AND 8, IDOL-LANE, LONDON, E.C.)

Thiocol is an interesting compound of guaiacol sulphate with potassium. It dissolves readily in water and is practically odourless and tasteless. By suitable treatment the guaiacol present, which amounts to 52 per cent., can easily be separated, although, generally speaking, the salt is stable. It would appear to offer some advantages over guaiacol and creasote in the treatment of tuberculosis and pulmonary affections in general. It is said to be, for example, without irritating effects on the gastric mucous membrane. There can be little doubt of its destructive action upon the tubercle bacillus, judging from a report which has reached us in which infected rabbits treated with thiocol were the subject of trial. For purposes of administration tablets containing 5 grains of thiocol are prepared.

OLD SERCIAL MARSALA.
(HENRY URQUHART, 16, WATER-LANE, GREAT TOWER-STREET, LONDON, E.C.)

A clean, dry, non-acid wine which may be placed in the category of high-class marsalas. Analysis gave the following results: alcohol by volume, 17·17 per cent.; extractives, 5·23 per cent.; mineral matter, 0·50 per cent.; volatile acidity reckoned as acetic acid, 0·15 per cent.; fixed acidity reckoned as tartaric acid, 0·42 per cent.; potassium sulphate, 0·31 per cent.; and sugar, 2·86 per cent. The wine has an elegant flavour characteristic of the best Sicilian wine; it is non-acid, it is not sweet, and is clean to the palate.

New Inventions.

NEW INSTRUMENTS.

THE following instruments, which I have used for some time at St. Peter's Hospital and elsewhere, were made for me by Mr. J. H. Montague of 69, New Bond-street, London, W.

FIG. 1.—*A modification of Maisoneuve's urethrotome.*—The defects in Maisoneuve's urethrotome are mentioned in the following paragraph and their remedies. The new urethrotome loses nothing in simplicity, while it is, I believe, a more efficient instrument. (*a*) The staff weakened by the groove is apt to buckle when there is difficulty in introducing it through a tough stricture, and further, the groove is difficult to keep clean. To meet these objections a stilette is provided which fits the groove accurately and gives stability, while it serves also for cleaning the groove. The stilette is withdrawn for the introduction of the knife. (*b*) The groove passes almost to the point of the instrument and the knife must therefore run into the prostatic urethra if pushed home. In the new instrument the groove is carried only to the commencement of the curve so that with the staff held at an angle of 45° the knife passes only as far as the membranous urethra. (*c*) The curve of the staff is improved so as to fit the urethra accurately. (*d*) In the original instrument a small ring on the under surface serves to steady the staff while the stricture is being cut. This is replaced by two large lateral metal wings which the assistant holds with the finger and thumb of each hand. (*e*) The knives are now stamped on the terminal button with the size in millimetres to which they cut. (*f*) The filiform guide of the Maisoneuve instrument ends abruptly in a metal terminal which contains the female screw. This shoulder often hitches in a narrow stricture, and the staff follows the guide with difficulty. The filiform guide tends to fray and break here. This is remedied by tapering the metal end of the guide so that it passes inside the flexible portion for a short distance.

FIG. 1.

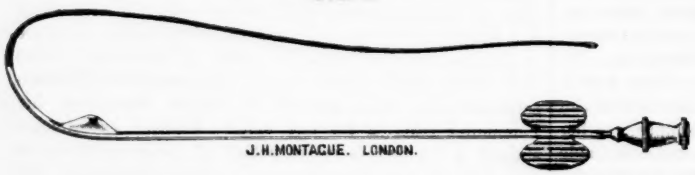


FIG. 2. *A ureteric scoop with flexible handle.*—The scoop measures ¼ inch across and 1 inch long, and tapers to a fine flexible handle the size and thickness of a stout probe. The handle is 10½ inches in length, and is ridged to indicate the hollow side of the scoop. The instrument is useful for removing a small calculus which lies a few inches down the ureter, and especially where the kidney cannot be brought to the surface or where the space between the ribs and the iliac crest is narrow. It is also useful where a small stone lies in the pelvic segment of the ureter, for by means of the scoop bent to the proper angle the calculus can readily be brought up to an opening in the ureter above the brim of the pelvis.

FIG. 2.

FIG. 3. *Fine long forceps*, eight inches in length, with terminals ½ inch long and ¼ inch broad, which are set at an angle and are hollow with a ridged contact edge. When these forceps are placed along the radial surface of the left forefinger the terminals pass round the tip of the finger. In exploring a kidney or renal pelvis a small calculus which is just reached by the tip of the forefinger can be removed with these forceps without enlarging the wound.

FIG. 3.

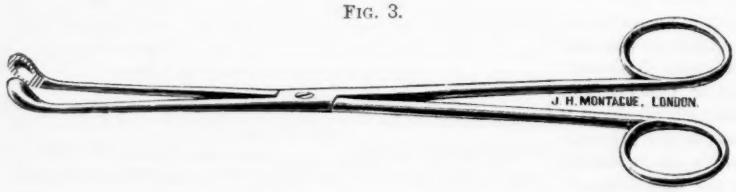


FIG. 4. *Bladder retractors.*—These retractors consist of a retracting portion, a shaft, and a handle. The retracting portion commences vertically where it is attached to the shaft, and ¾ inch below this it curves suddenly outwards for ½ inch and then becomes vertical again for 1¼ inch. The edge of this portion is smooth and the corners are rounded. Transversely it is concave inwards. The shank is horizontal, and from this the handle curves upwards almost to a right angle and ends with a short recurve, the under surface of which is hollowed. The handle is fenestrated and ridged. The object of this instrument is to retract the abdominal wall and cut edge of the bladder wall by horizontal traction, and to push the collapsing lateral bladder wall outwards by a tilting action. This combination of traction and tilting is obtained by the peculiar construction of the handle, which is grasped in the hand with the thumb held vertically, pushing up into the hollow of the recurved portion.

These instruments are made in different widths of the retracting portion (1¾ inch, 1¼ inch, ¾ inch are useful sizes). The vertical size and the shape of the retracting portion, and the shaft and handle, remain unaltered.

FIG. 4.

J. W. THOMSON WALKER, M.B. Edin., F.R.C.S. Eng.,
Assistant Surgeon to St. Peter's Hospital for Stone and other Urinary Diseases.

THE LANCET.

LONDON: SATURDAY, MARCH 5, 1910.

Some Speculations on the Poor-law Medical Service of the Future.

IN applying the term "Poor-law" to a service of the future, to be organised under new conditions imposed by the legislature, we use a convenient expression for which no substitute has as yet been provided. The "break up of the Poor-law" is a phrase which has established itself in public favour, but whether that destruction of existing agencies is to be effected upon the lines of the "Majority Report" or upon those of the "Minority Report," the combined monosyllables are apparently to be eliminated from our vocabulary; and whether the medical officer of the future is to serve under a new "Public Assistance Authority," as recommended by the Majority, or under the sanitary authority, as the Minority prefers, he will have to be distinguished by a new title. It is, however, with the possible changes in the scope of his duties, in the nature of his responsibilities, and in his general status that he is more immediately concerned, whether he views the situation from the standpoint of the officer to the guardians or from that of the general practitioner, and the familiar phrase may as well be retained for the present. With a view to obtaining the opinion of existing Poor-law medical officers upon suggested innovations the Poor-law Medical Officers' Association has addressed to its members the series of questions which we print on another page (p. 670), and to which we have added one or two observations of our own. We need, perhaps, hardly say that these questions will be answered with more authority by those who have studied in the original Blue-book the reports of the Majority and Minority Commissioners, together with some at least of the criticism which has since been made upon both of these in THE LANCET and elsewhere. They will thus understand the full effects of their answers and appreciate to what degree a particular reply tends to commit them as supporters of the one scheme or of the other. Probably neither report is wholly satisfactory to the general body of Poor-law medical officers, and many who read the questions and consider them in relation to the reports will find that in both their official and private capacities they will be tempted to give answers at variance with the findings of the Commissioners. There is, of course, another point of view besides that of the supporter of one report or the other, and we would point out to those who answer these questions, or who endeavour to make suggestions as to what the Poor-law Medical Service of the future should be, that it may be possible to adopt recommendations from both reports and to remodel the administration of public relief upon lines not drawn exclusively from either. We may suggest, in explanation, that if reference is made to Question 11 it will be found to ask for criticism of the principle upon which the Minority desires that public medical aid should be rendered. Question 6 asks, in like manner, for an opinion upon the Minority's proposals as to the authority which is to render that aid, and to be responsible for its efficiency, employing, paying, and organising a medical service for the purpose. We submit to our readers as a thing well worthy for their consideration the question whether support of the Majority or of the Minority upon one of these questions need necessarily bind them to the taking of the same side as to the other. It appears to us that some may reasonably think that the existence of a Public Assistance Authority with power to discriminate between those who are fitting subjects for public or, may we say, "Poor-law" aid, and those who are not, is not altogether incompatible with the amalgamation of the Poor-law Medical Service and the Sanitary Service, so that the one service should perform (not necessarily through the same individual officers) the functions of both. In short, it is possible to contemplate an authority responsible for the curing and prevention of disease which should have its subject matter allotted to it by another authority charged with the duty of preventing the abuse of public aid, medical and sanitary, by those not properly its objects.

The fifth question propounded by the Poor-law Medical Officers' Association calls attention at once to the address of Dr. JOHN C. MCVAIL recently delivered before a convention of Sheffield societies, the constructive part of which we publish in full (see p. 664). It will be observed that Dr. MCVAIL in his opening paragraph makes a number of suggestions which might well engage the attention of the central authority before the introduction of any great legislative change. The greater number of them will secure the assent of those engaged in the Poor-law service as well as of other members of the medical profession; and those who have read the Majority Report will recognise the weight given to Dr. MCVAIL'S opinions by its signatories[1] in these respects and with regard to other topics. We may refer to his views upon Question 5, which relates to the institution and organisation of provident dispensaries as part of a new system of public assistance. This, it will be remembered, is the conspicuous feature which distinguishes the Majority Report, so far as its proposals affect the medical profession. The subject is one for the consideration of the profession at large, as well as of those who are now members of the Poor-law service, no less than is the scheme for the enlargement of the Poor-law service. Medical opinion is not likely to be enthusiastically in favour of the improved provident dispensary, for such an institution clearly carries much risk to certain forms of general practice, but we would ask those who are adverse to it to weigh carefully the words of Dr. MCVAIL when he dwells upon what he regards as the essential feature of its proposed improvement. There is, he points out, "no fair or reasonable analogy between such clubs (sick clubs as they have existed in the past) and the suggested medical provident institutions." We confess that we foresee

[1] THE LANCET, April 10th, 1909, p. 1065.

many difficulties in the institution of such dispensaries and in the ensuring that they shall work smoothly and satisfactorily with regard to the medical profession and the public. Probably they would be more acceptable to both in purely working-class districts of the poorer kind, where the private practitioner would not be likely to find himself after a time attending his more lucrative patients as members of the dispensary, and as such in return for reduced fees. The free choice of a medical attendant, moreover, is likely to lead to difficulties if we assume that some patients are now influenced in their selection of a particular medical adviser by the fact that his fee is lower than that of another whom they would otherwise prefer. And yet it is extremely difficult to say that a man who pays for his medical attendance, if his contribution forms a substantial part of the fee received by the medical man, should not be allowed to select the practitioner whom he desires. We do not, however, gather from the Majority Report that it recommends free choice of a medical attendant for the Poor-law patient—i.e., for the applicant who is not a member of a provident society. It is contemplated that he shall be attended by a district medical officer, at any rate as long as the post of district medical officer survives.

As we understand it, the proposal of improved provident dispensaries is made with a view to prevention, and is part of a policy for keeping outside the Poor-law (we still use the term as a convenient one) those who might otherwise, and through ill-health, lapse from independence into dependence upon public assistance. A modified or partial public assistance, in short, is suggested for these taking the form of the subvention of the dispensary from public sources. It is this that promises an improved financial status for the dispensary. The question relating to provident dispensaries should produce some interesting replies from Poor-law medical officers, and we are inclined to anticipate that difficulty will be found by some in accepting the principle of the selection by the subscriber of any medical man attached to the dispensary. It is a scheme of great public importance, but from a medical point of view it does undeniably suggest possibilities of rivalry and friction of a more or less serious nature. It may, in short, be found that the higher the qualifications of those medical men whom the improved conditions will attract, the less acceptable those conditions will appear to some of their brethren. It must be remembered that the questions to which we have referred are put to the members of an important public service with a view to obtaining their opinions upon points which intimately affect themselves and their personal interests, as well as the welfare of the community, and that, if we rightly understand the trend of the two reports, the scope and importance of the public service will be enlarged under either, but more conspicuously under that of the Minority. On the other hand, the Majority Report would have the dispensary extend its membership downwards among those who now are too improvident, or who think themselves too poor, to subscribe, and at the same time, extending upwards, would have it provide State-aided medical attendance for a class which has hitherto procured medical attendance for itself.

The Teeth of the Soldier.

THE perfect mastication and insalivation of the food have been proved by experimental investigations—notably those of Sir MICHAEL FOSTER—to produce not only great economy in general nutrition but also a remarkable improvement in the condition of the gastro-intestinal tract. During recent years considerable attention has been directed by the medical authorities of the army to the subject of dental sufficiency for recruits, and a fairly uniform standard is gradually being evolved. It has to be borne in mind that a recruit for the regular army must be fit for the average conditions of European warfare, and that recruits for the Reserve forces (formerly termed the Militia) must be fit for the average conditions of warfare in the United Kingdom, a safe rule being that the poorer the physique of the recruit the higher the standard of teeth to be demanded of him. Each recruit must have the equivalent of one of the following minimum standards, each tooth being either sound or efficiently stopped. The teeth in the upper jaw only are named, and they must correctly oppose corresponding sound or efficiently stopped teeth in the lower jaw. (1) Wisdom and second molar on one side of the mouth; (2) first and second molar on one side; (3) first molar and both bicuspids on one side; (4) first molar and second bicuspids on both sides; (5) first molar and second bicuspid on one side of the mouth and both bicuspids on the other side of the mouth; (6) both bicuspids on each side of the mouth; (7) one molar on one side and both bicuspids on the other side. The remainder of the teeth are left to the judgment of the recruiting medical officer. Loss or decay of teeth causes yearly the largest number of rejections for any one cause in recruits for the army. In 1908 no less than 3279 recruits were rejected for this cause, in 1907 2861, in 1906 3719, and in 1905 4824. Approximately 19 per cent. of all recruits rejected on inspection by recruiting medical officers are lost to the army owing to deficient or defective teeth, and this estimate does not include men who are rejected by recruiting agents. These figures are of the utmost importance when it is remembered that the possession of defective teeth goes with a good physique quite as often as with a poor physique.

During the South African war a great number of men were found to be unable to consume the hard biscuit of the field service ration owing to lack of efficient teeth, and so many men had to be invalided that recruiting medical officers have since then very rightly paid particular attention to the standard of masticatory efficiency. There is no doubt, however, that some of the inefficiency attributed to defective teeth during the war was overrated. A fair proportion of it was really due to the effects of scorbutic taint and lowered vitality brought about by a prolonged campaign in which "freshness" of food was at a minimum. Men tired of prolonged active service also sometimes made use of bad teeth as an excuse for not being able to eat the field rations and for going to hospital. As a result of the number of men who had to be invalided the standard for the masticatory efficiency for recruits was increased to such an extent that the pendulum swung rather too far in the direction of increased efficiency. No account was taken of the large

number of almost toothless soldiers who, under the exceptionally trying conditions of the war, not only remained in good health but did their duty alongside their comrades who, although better off in teeth, were eating hard biscuit with difficulty. A less stringent standard for teeth was adopted in 1906–07, and a diminution in the number of rejections followed. Many recruits were passed into the army through the aid of dental treatment at the public expense who would otherwise have been rejected, upwards of 1700 men being gained under these conditions in 1907 out of 5849 men enlisted for the army. In the Northern Command alone 915 recruits were brought up to the standard by the dentist in the year, and in the London District 295 men were similarly rendered efficient during the seven months the regulations regarding dental treatment were in force. It was, however, noticed that in the London District and in the Eastern Command the ratio of rejections for defective teeth increased after the introduction of the system of dental treatment for recruits. This was found to be due to recruiting agents bringing up candidates with very inferior teeth in the hope that they might be accepted by the help of dental aid.

When we consider the question of invaliding serving soldiers for dental inefficiency, it will be found that before the South African war defective or deficient teeth caused very little invaliding from the army; in fact, this cause of invaliding was of so little importance that it was thought by the authorities not to merit mention in their annual reports. During recent years the official statistics show that in 1906 of 1792 men discharged from the service on medical grounds no less than 147 were invalided for caries of the teeth; in 1907 of 1685 men invalided, 58 were discharged from the same cause, the diminution being partly due to a less rigid standard of dental sufficiency and also as a result of greater care being paid to the preservation of the teeth. In 1908 67 men, out of 1486 discharged on medical grounds, were invalided for dental caries. The very fact that soldiers have to be discharged in such numbers from the army for caries of the teeth seems to indicate that greater attention should be paid in barracks to the care of the teeth, and that insufficient examination is made of the men's teeth from time to time, so as to check the progress of caries by dental aid. There can be little doubt that if men are taught to care for and preserve the teeth they possess by using the tooth-brushes which are issued free by Government to each man much can be done. From the time they enlist their squad, section, and company commanders should see that they keep their teeth clean. It should be no more difficult to teach them to keep their teeth clean than their rifles. The result will repay any little trouble or attention, and the habit once acquired will also repay the men by much personal comfort. Each commanding officer should have a small sum allotted to his unit annually for dental repairs, and these should be expended under the supervision and advice of the medical officer of his unit. At present large sums of money are allotted by the War Office to commands and distributed by principal medical officers to administrative medical officers for the purpose of dental treatment, but a roundabout method is enforced as to its expenditure. If a soldier wishes to have a tooth stopped he has to apply to a medical officer, the latter has to make a chart of the man's mouth and obtain an estimate from the local dentist at contract rate and apply to have the estimate sanctioned by the administrative medical officer. Correspondence means delay and is tiring to all concerned. The system of dental treatment at contract rates by civilian dentists should prove successful, but it is to the early education of the recruit in the care of his teeth in barracks that we must look for an improvement in the dental efficiency of the soldier.

A New House for the Royal Society of Medicine.

IT is now widely known that the Royal Society of Medicine is to build itself a new house which shall be worthy of the body that has in its keeping the scientific progress and solidarity of British medicine. This decision has more than a domestic importance. During the last century at least five serious attempts were made to amalgamate the principal medical societies having their meetings and habitations (when these existed) in London, but every one fell through, and it was not until 1905 that the scheme which led two years later to the constitution under Royal Charter of the Royal Society of Medicine was first officially and publicly discussed. Since that date the history of the society can be summed up in the one word, success, and it is that very success that is urging the society to expansion both for the better accommodation of its present members and in preparation for a considerable accession to its ranks. The number of Fellows drawn from the original constituent societies was 1823, and the number of Members 688, making a total of 2511. At the present time there are 2335 Fellows and 993 Members, making a total of 3328, whilst three new sections, those of Anæsthetics, Diseases in Children, and Balneology and Climatology, have been added to the society since its inauguration. The authorities of the society have seen that in the not distant future provision must be made for 6000 or 7000 Fellows and Members, and this could only be done by buying or building a house which should belong exclusively to the society and be properly equipped to meet all reasonable demands.

At the end of last year a general meeting of the society was held, whereat it was proposed that the money necessary for the change of quarters should be raised by a scheme of insurance. This did not commend itself to the meeting, but an able exposition of the state of the society's affairs which was made on this occasion by Dr. ARTHUR LATHAM, one of the honorary secretaries, must have convinced most of those present that a move into larger quarters was at least expedient for the society's welfare. Since then steps have been taken, for at a meeting convened at the beginning of last month the society resolved to grant an 80 years' lease of 20, Hanover-square, the premises which were taken over from the Royal Medical and Chirurgical Society, from Lady Day next for a very substantial rental; and No. 15, Cavendish-square has been secured to afford temporary premises for the society until the erection of its new house. The site chosen for this building may be called almost the pivot of medical London, for it is at the corner of Henrietta-street and

Cavendish-square, and occupies an area of very nearly 10,000 square feet. Upon this a house with either three or four floors and a basement will provide ample accommodation for a society even of the size to which it is confidently expected that the Royal Society of Medicine will attain. No freehold site was available in the locality required, and in days when it is unusual to hear a good word for a ground-landlord it is gratifying to learn that Lord HOWARD DE WALDEN has made a considerable concession in granting a fresh 99 years' lease of this site, although the lease actually purchased has 21 years fewer to run. The premium for this lease is £7500 and the ground rent is £400 per annum, and to meet the capital expenditure investments have been realised by the society. We understand that the documents in execution of these several transactions have actually been signed. There remains the question of the building and the equipment of the new premises. In order to raise the necessary funds the society has expressed itself to the effect that the appeal should be made within its own ranks, and in accordance with this wish a letter has been addressed to the Fellows and Members asking for their help in raising the sum of £30,000 which it is estimated will be required for these purposes. The appeal is based broadly upon the consideration that the society's income and expenditure are estimated to nearly balance each other, leaving a small favourable margin, but that if economies are effected sufficient to pay interest on a new debenture loan the attractions and usefulness of the society would be very considerably diminished. This would mean that the whole object of the expansion of the premises would be falsified.

We commend this appeal to the medical profession in the first place and to wealthy laymen of culture and public spirit in the second. The welfare of the Royal Society of Medicine is not an affair that concerns only metropolitan practitioners. Medical men all over the kingdom and, indeed, throughout the Empire have sought, and should seek, admission to its doors, and the adequate housing of its magnificent library alone should be a matter of national medical interest. When we consider the premises of kindred medical bodies in other capitals it is disconcerting to think that we have been content to go on so long without any such central institute as is now proposed. The union of medical societies out of which the Royal Society of Medicine has been created should have one of its greatest justifications in the opportunity afforded to its constituents of keeping in personal touch with their scientific colleagues and with the contemporary thought and literature of medicine. In other words, a proper home to be the headquarters of national medicine is required. And seeing that whatever makes for professional efficiency makes for the comfort and safety of the public it is plain that a gift towards the proper establishment of the society on a permanent footing in an adequate house would be money well spent by any member of the community. We believe that the present needs of the Royal Society of Medicine may be met in a perfectly legitimate manner by lay benefactions no less than by the contributions of the great body of medical practitioners, while we consider that the scientific progress of medicine in this country is in some sort bound up closely with the fortunes of the Royal Society of Medicine. There is room for other societies, and other societies will flourish, but the Royal Society of Medicine will not fulfil the ideal of those responsible for its creation unless it assumes a national character. We should like to see the society's appeal meet with a liberal response from inside the medical profession, but we should also like to learn of lay benefactions. For the society has already put the public in its debt by appointing committees of inquiry into several questions of vital importance to the public welfare—we need only instance the committee which dealt recently with the resuscitation of the apparently drowned—and it is a good thing that the community of interests between the medical profession and the public should be recognised. Medicine has little endowment in this country, and in the Royal Society of Medicine there is an opportunity for administering financial encouragement to the progress of the most humanitarian of sciences which will well repay the man who takes it.

Annotations.

"Ne quid nimis."

THE DISPENSING OF POISONS BY MEDICAL PRACTITIONERS.

IN THE LANCET of Jan. 29th attention was drawn to an inquiry held at Fulham coroner's court, and more especially to the fact that the jury asked the coroner to lay the circumstances of the case before the Home Secretary, "in order that legislation providing for a distinctive form of bottle might be brought about." It was pointed out that the regulations as to the methods of storing and dispensing poisons, with which pharmacists were by law compelled to comply, were not applicable to medical practitioners, but it was suggested that this fact in no way lessened the obligation of medical men who dispense to carry out the same methods of safety to the public as if the law was obligatory upon them. At a meeting of the Executive Committee of the General Medical Council on Feb. 21st a letter was considered from the Privy Council drawing attention to the suggestion that the regulations in question should be extended, by legislation, to medical men, and asking for observations thereon. It was resolved by the Executive Committee:

> That the Lord President be informed that the suggestion that the regulations in question should be extended, by legislation, to medical men has been laid before the Executive Committee, and that the committee approves such extension as tending to ensure the safety of the public.

In these circumstances, it will be useful to state that the regulations are as follows:—

1. That in the keeping of poisons each bottle, vessel, box, or package containing a poison be labelled with the name of the article, and also with some distinctive mark indicating that it contains poison.

2. Also that in the keeping of poisons, each poison be kept on one or other of the following systems, viz.:—(*a*) In a bottle or vessel tied over, capped, locked, or otherwise secured in a manner different from that in which bottles or vessels containing ordinary articles are secured in the same warehouse, shop, or dispensary; or (*b*) in a bottle or vessel rendered distinguishable by touch from the bottles or vessels in which ordinary articles are kept in the same warehouse, shop, or dispensary; or (*c*) in a bottle, vessel, box, or package kept in a room or cupboard set apart for dangerous articles.

3. That in the dispensing and selling of poisons all liniments, embrocations, lotions, and liquid disinfectants containing poison be sent out in bottles rendered distinguishable by touch from ordinary medicine bottles, and that there also be affixed to each such bottle (in addition to the name of the article, and to any particular instructions for its use) a label giving notice that the contents of the bottle are not to be taken internally.

MEDICINE AND HONORARY DEGREES AT TRINITY COLLEGE, DUBLIN.

WELL inspired was the initiative taken a twelvemonth ago by the University of Oxford in publishing the "orationes" setting forth the claims of her adopted sons to the degrees she conferred on them, and now we have her Dublin sister following suit, and on similar lines entertaining us to a "march-past" of the distinguished personages, male and female, whom she admitted to the academic "civitas." We are promised, moreover, from the University of Cambridge a further series of "orationes," in which the Public Orator has recommended the meritorious of both sexes to honorary graduation—the three volumes thus forming a triptych in illustration of the learning and the achievement of the contemporary world. The value of such a record is manifest to none more than to the future historian, who will find in the series a gallery of portraits, or rather a cabinet of cameos, in which he can study the features, intellectual and moral, of the men and women of whom he will have to take cognisance. The language in which these likenesses are conveyed is the traditional Latin, which, in addition to its clearness, brevity, and dignity, has the further advantage of "fixity," no longer liable to the changes, more or less subtle, so apt to modify the meaning of the languages called "living." Latin, indeed, if never likely to become universal, as the Humanists of the Renaissance believed, has, *ipso facto*, the quality of permanence or immutability which gives to its words that "monumental" character which still makes it the appropriate medium of epigraphy, and of such succinct and concentrated presentation as is embodied in the "orationes" above referred to. Long practice in the *métier* has made such oratory one of the "fine arts," in which successive masters have perfected themselves, no previous Public Orator having excelled, or even equalled, Dr. W. W. Merry of Oxford or Dr. Arthur Palmer or Professor Tyrell of Dublin, or, not inferior to the best of these, Dr. Sandys of Cambridge. Addressing as they do not only their respective audiences but the whole outlying world of learning and achievement, these "orationes" will impress the sympathetic foreigner with the catholicity of British culture, as there is hardly a sphere of human activity known to civilisation in which they fail to recognise merit or on which they do not set the seal of academic approbation. Conspicuous among the professions thus honoured is the most progressive, the most universally diffused of all, that of the healing art in its multifarious departments, propædeutic, theoretical, and practical, and it is with special pleasure that we note the frequency, as in the Oxford series so in that of Dublin, with which the biologist, the sanitarian, the surgeon, and the physician pass before us in a pageant, which gives to either volume the semblance of a literary and scientific or a professional and social "field-day." Beginning with the honorary degrees conferred at the celebration of the tercentenary of the University of Dublin in July, 1892, we note the names of the late President of the Royal College of Surgeons of England, Mr. Thomas Bryant, and of Sir Jonathan Hutchinson and Professor J. S. Billings of New York, happily still spared to us, and of Gusserow of Berlin, Sir Andrew Clark of London, and Sir T. Grainger Stewart of Edinburgh, since "gone to the majority." The "orationes" in which each of these eminent surgeons or physicians was recommended for the degree of M.D. is quite a literary gem, signalising with a few masterly strokes, in Latinity of exquisite purity and finish, the contributions made by each recipient to the healing art, scientific or clinical. Then follows a long line of "graduands" on whom the degree of Doctor of Science was conferred, the medical calling once more coming in for special recognition in the persons of Sir J. Burdon-Sanderson, Sir Michael Foster, Sir G. Murray Humphry, Professor A. Macalister, Professor Kollmann of Basle, Dr. Ch. Richet of Paris, Sir William Turner of Edinburgh, and Professor Wilhelm Waldeyer of Berlin. This closes the list of tercentenary honours, and next comes, year by year, from 1888 to 1908 a goodly company of men of light and leading, selected from nearly every calling or career open to merit, on all of whom degrees, in one or other faculty, were bestowed. Once more medicine in its several branches receives ample and cordial recognition—the names, which we give in alphabetical order, representing such contributors to scientific or clinical knowledge as Sir T. Clifford Allbutt, Sir Lauder Brunton, Professor D. J. Cunningham, Sir T. R. Fraser, Sir W. R. Gowers, Professor Albert Kossel, Dr. John Marshall, Dr. Pye-Smith, Sir Richard Quain, Professor Ronald Ross, Professor E. A. Schäfer, Professor C. S. Sherrington, Sir H. R. Swanzy, Professor W. H. Thompson, Sir Frederick Treves, Sir Willoughby Wade, and Sir Almroth Edward Wright. The task of recommending these for graduation seems to have fallen in pretty equal proportions to the late Dr. Arthur Palmer, professor of Latin, and to Dr. R. Y. Tyrell, professor of Greek, both Public Orators of signal critical power and skill in portraiture. Our readers must turn to the volume itself[1] for illustration of the refined scholarship and felicitous allusion with which the several "orationes" achieve the results of miniature painting in prose, and we can promise them a treat such as they have enjoyed in the sister volume of Dr. Merry of Oxford, noticed just a year ago in these columns under the title of "Medicine in the Sheldonian Theatre."

RHEUMATIC INFLAMMATION OF SEROUS MEMBRANES.

IT is well known that inflammation of the serous membranes, especially of the pericardium and pleura, with or without endocarditis, may occur during the course of acute rheumatism. Dr. Ernest Mosler of Berlin, in an interesting paper in the *Berliner Klinische Wochenschrift* of Feb. 14th, points out that multiple serous inflammations may occur suddenly in rheumatic subjects and that they may dominate the clinical picture. He also claims that this condition, to which the inelegant name of polyserositis rheumatica has been applied, is less uncommon than is generally supposed, since during the last 18 months there have been 15 such cases in the first division of the Rudolph Virchow Hospital at Berlin. The cases fall into two groups—one in which the condition occurs during the course of an attack of acute rheumatism of severe character, seldom beginning before eight days and often not until three weeks after the onset of the joint symptoms. In the other group there is more difficulty in recognising the nature of the affection of the serous membranes, the joint symptoms preceding them being slight in character and easily overlooked, so that the clinical picture is more suggestive of septicæmia. In both groups the onset of severe symptoms is sudden. There are usually severe stabbing pain in the region of the heart, severe dyspnœa, increasing until orthopnœa supervenes, and an increase in the sensation of heat and fever. In some cases shortly after the onset friction sounds can be heard in the pericardium and pleuræ, and in most cases by the second day these are widely heard, and at this time there may be some dulness on percussion at the bases of the lungs. In the majority of cases the pericardial friction persists during the course of the affection, while the pleural friction disappears owing to the occurrence of pleural exudation, which, however, rarely reaches a degree sufficient to require tapping. In some cases endocarditis

[1] Trinity College, Dublin. Speeches of Public Orators delivered at the Comitia held for Conferring Honorary Degrees. Dublin: Hodges, Figgis, and Co.

complicates the condition and may supervene during or after the other serous inflammations. Some degree of myocarditis occurs in all cases, and very shortly after the onset of symptoms marked irregularity of the pulse with dicrotism and sometimes with bigeminism develops. The pleurisy and the pericarditis usually clear up without leaving any permanent damage, but the myocarditis, if persistent or if complicated by endocarditis, may cause convalescence to be very protracted and may be followed by organic mitral regurgitation. In a few of Dr. Mosler's cases the toxic nature of the affection was clearly manifested by evidence of renal irritation in the form of albuminuria with abundant casts. In all the cases investigated blood cultures proved sterile. The pleural exudation consisted almost invariably of turbid, serous fluid and also gave negative results on bacteriological examination. Cytological investigations showed more leucocytes than lymphocytes. Dr. Mosler believes that the dyspnœa, which is the symptom causing most distress to the patients, is due to the pericardial inflammation and not to the fluid in the pleural cavities. The prognosis of the condition is by no means bad, and in general is more favourable after puberty than in childhood. Of the 15 patients studied by Dr. Mosler, 10 were discharged cured, 4 were left with severe mitral regurgitation and some chronic rheumatic changes in the joints, and 1 case died. The treatment adopted was to give antipyrin in solution as the anti-rheumatic medium with the least harmful effects, and to give small doses of morphine for the relief of the pain and dyspnœa. Good results were invariably obtained from this latter drug, and even a small, rapid, and irregular pulse was not regarded as a contra-indication to its use. Locally warm applications to the præcordial region gave relief, and painting with iodine was also found to be useful. The application of an icebag proved to be unpleasant to all the patients to whom it was applied. In cases with severe affection of the myocardium digalen was given, and subsequently carbon dioxide baths were employed. The condition of polyserositis or polyorromenitis formed the subject of an interesting paper by Dr. F. Taylor[1] some years ago, who pointed out the importance attached to these cases by Italian observers. Similar multiple serous inflammations occur in pyæmia and in tuberculosis.

THE METROPOLITAN WATER-SUPPLY (NOVEMBER, 1909).

THE Water Examiner has recently issued his report on the condition of the Metropolitan water-supply during the month of November, 1909. The mean rainfall during the month at 12 stations which were selected as giving equal representation for all parts of the Thames basin was 0·84 of an inch, being 1·85 inches below the average mean rainfall for the month during the previous 26 years. The average daily flow of the Thames at Teddington weir during the month was 1384·8 million gallons, being 46·8 million gallons below the daily average for the month during the preceding 26 years. A table is given in the report which shows for the month in the different districts the storage capacity in gallons for unfiltered water and also the number of days' storage. In the New River district the number of days' storage was only 10·8, while in the western district it was only 11·7; in the eastern and southern districts 56·2, and 32·9 days' storage were available respectively during the month. The water from the Kent works being derived wholly from 18 deep wells in the chalk and one in the upper greensand needs no storage or filtration before delivery. Another interesting table gives for November, 1909, the percentage of the total supply derived from the different sources. The figures are as follows: from the Thames 57·88 per cent., from the Lea 22·99 per cent., from springs and wells 19·04 per cent., from ponds 0·08 per cent. The number of gallons of water supplied per head per day during the month is given for the different districts. The mean supply for London as a whole was 31·17 gallons. In the eastern district an average amount of 28·06 gallons per head per day was supplied, while in the western district 35·53 gallons was the daily quantity. Accompanying the report of the Water Examiner is an interesting report on the Results of the Chemical and Bacteriological Examination of the London Waters for the month, by Dr. A. C. Houston, the Director of water examinations of the Metropolitan Water Board. This report shows that Dr. Houston is continuing the very important systematic routine examinations which are so essential in safeguarding the London water from serious contamination, since any dangerous breakdown in the purifying processes to which the water is submitted would at once be shown by the exhaustive analyses made. The results of the chemical analyses for November, 1909, show that the standard of purification was not so high as in November, 1908, both for raw and filtered waters. Speaking generally, the albuminoid nitrogen figures and the figures for oxygen absorbed from permanganate were markedly higher for almost all the districts than for the corresponding period in 1908. A great number of detailed bacteriological examinations have been made and the results are tabulated. They show for the month the average number of bacteria present per cubic centimetre for filtered and for raw waters, also the number and types of the bacillus coli communis present have been carefully determined, and the results of the special tests for the bacillus enteritidis sporogenes are given. On the whole Dr. Houston regards the bacteriological results as satisfactory. Dr. Houston has given the results of the chemical and bacteriological examinations for the autumn quarter (September, October, and November), 1909. These compare unfavourably with the corresponding period for 1908, and Dr. Houston thinks that the meteorological conditions of the autumn months of 1908 were more favourable from a water purification point of view.

[1] Brit. Med. Jour., Dec. 15th, 1900, p. 1693.

REGICIDAL MEGALOMANIA.

AN Italian correspondent writes: "On Feb. 14th in the establishment for criminal lunatics at Montelupo (Tuscany) died Giovanni Passanante, condemned to solitary imprisonment for life, after having on Nov. 17th, 1878, attempted to assassinate King Humbert. The circumstances were these. His Majesty, who had been some nine months on the throne, was visiting Southern Italy, and on the date above referred to drove through the streets of Naples with the Queen, the boy Prince of Naples (now King Victor Emmanuel III.), and the Prime Minister, Benedetto Cuiroli. All four were in the Royal equipage when suddenly there sprang from the crowd a young man who, resting with one foot on the carriage step, levelled a stiletto blow at the King. The weapon just grazed His Majesty's shoulder, but a second blow took effect on Cuiroli, inflicting a punctured wound just above the knee. That intrepid patriot, who had seized the would-be assassin, still, though wounded, maintained his hold upon the wretch till he was overpowered and removed in custody. The incident, which scarcely occupied three minutes, told gravely on the Queen and the boy Prince, the latter, it is said, having been so terrified during the struggle as to have incurred convulsions which recurred for many weeks thereafter, particularly at night. Passanante, convicted after a State trial, during which he confessed by way of *apologia*, that he wanted to rehabilitate society by levelling down all distinctions of rank,

was sentenced to solitary incarceration for life in the Island of Elba, a short experience of which, however, induced such manifest decrepitude—physical and mental—that he was transferred to the establishment for criminal lunatics at Montelupo. Hence he dragged out his existence among felons similarly afflicted, spending his time in working out grotesque designs in dough (latterly in clay), symbolising the social state as he dreamed it ought to be. A collection of these is preserved in the Museo Antropologico at Montelupo, and will doubtless figure in the expert report on his case now in preparation. For further examination with that object his head has been removed, and its configuration, capacity, and contents are now being subjected to minute observation and analysis. The report cannot fail to be highly interesting and instructive, and will form one of a series of which the 'Biografia del Bandito, Giuseppe Musolino, di Fronte alla Psichiatria ed alla Sociologia' (Biography of the Brigand Joseph Musolino, in Relation to Psychiatry and Sociology), is perhaps the most elaborate and illuminating, due, as it is, to the research and expository skill of Dr. E. Morselli, professor of psychiatry at Genoa, and of Dr. S. de Sanctis, *privat-docent* in the same subject in the University of Rome. Pending the publication of the report, the effects of solitary confinement on prisoners for life ending, as the dread ordeal well-nigh invariably does, in dementia (when not cut short by suicide), the question of how far such a form of punishment is justifiable has again cropped up, the upholders of capital punishment renewing their contention that the death penalty is infinitely more humane and in all respects more conducive to the interests of society than the 'intra-mural sepulture' (as it is not inappropriately called) which is substituted for it. Certainly, the abolitionists cannot claim for their method of vindicating justice and protecting society the efficacy of a deterrent, as the example of Italy, after 30 years trial of it, is the reverse of reassuring—her statistics of homicide being such as to maintain for her a sinister priority in lethal crime throughout Christendom, and to fortify the French legislature in reviving the guillotine which has (with results similar to those in Italy) been practically suspended."

WILL LEAD APPEAR WHEN POLONIUM DECAYS?

THIS momentous question promises soon to be decided, now that Madame Curie (and with her M. Debierne) has obtained a weighable quantity of polonium from pitchblende. According to an interesting note upon the subject by Professor R. Rutherford in *Nature* of Feb. 24th there are present in 1000 kilogrammes of pitchblende containing 50 per cent. of uranium 170 milligrammes of radium, and the weight of polonium is about 1-5000th of this, or about 1-30th of a milligramme. In order to obtain 1-10th of a milligramme of pure polonium several tons of high-grade pitchblende must be worked up. The fact, therefore, that Madame Curie has obtained a weighable quantity of polonium implies again an enormous amount of painstaking work which must receive our admiration. It should be pointed out, however, that Murckwald, operating on 15 tons of pitchblende, obtained some time ago 3 milligrammes of intensely active material which he called radio-tellurium, since tellurium was amongst the isolated products. The possibility of decay into other elements had not then received serious discussion, but Murckwald's purified product showed an activity far greater than that of radium. It was evidently polonium, for it gave off the typical α-radiation. Since polonium, as Professor Rutherford points out, emits α-particles, one of its products of decomposition, as for all other α-ray products, should be helium; and further, since polonium is the last of the active products observed in the radium series, it is to be expected that polonium will be transformed into helium and lead, one atom of polonium producing one atom of helium and one atom of lead. But no doubt, he adds, an interval must elapse to allow the polonium to decay before the final examination of the residual substance can be made. Madame Curie's excitement as to the issue of the degradation will be universally shared.

A PARATYPHOID CARRIER.

IT is now well recognised that persons who have suffered from typhoid fever may harbour the bacillus for years after recovery and be a source of infection to others. In the *Progrès Médical* of Jan. 15th Professor E. Sacquépée and Surgeon-Major Bellot have described what appears to be the first recorded instance of a paratyphoid carrier. It may be remembered that paratyphoid fever is a disease which clinically resembles typhoid fever but is not due to the typhoid bacillus, but to an organism with cultural characters intermediate between the typhoid and the colon bacillus. This disease was first described by Schottmüller in 1901. Two types of paratyphoid bacillus, A and B, are recognised by their different cultural characters. On potato the growth of A, like that of the typhoid bacillus, is invisible, while that of B forms a greyish brown pellicle, like the colon bacillus. In the case described by Professor Sacquépée and Surgeon-Major Bellot the type B was present. In a corps of 250 soldiers which formed part of a garrison an outbreak of paratyphoid fever occurred. On June 14th one man was attacked, on the 15th two men were attacked, on the 16th five, on the 18th five, on the 19th three, on the 20th two, and on the 21st one, making a total of 19 cases in eight days. Most of the cases ran a benign course, a few were severe, and none were fatal. The duration of the disease was from 15 to 22 days. In three cases meningeal symptoms—intense headache, rigidity of the neck, and Kernig's sign—were prominent. The diagnosis was soon made by bacteriological examination. In seven out of eight cases cultures made from the blood showed the paratyphoid bacillus of the type B. In 12 cases the stools and urine were examined. The bacillus was found ten times in the stools and twice in the urine. Finally, a positive serum reaction for the paratyphoid bacillus of the type B was obtained in all cases. In investigating the outbreak attention was drawn to the fact that the "epidemic curve" corresponded to the manifestations of a water-borne or food-borne disease; the cases at first were numerous; the outbreak lasted some days and then ceased. The drinking water was exculpated; its examination before, during, and after the outbreak revealed nothing abnormal. The men in the other corps of the garrison, who consumed the same water, were free from infection. The source of infection must therefore have been the food. The cooking arrangements for the affected corps were special to it. The source of infection could not have been raw food, for although salads, strawberries, and the like, were distributed, they were not consumed by all the patients or even by a majority of them. The source must therefore have been cooked food. Properly cooked food has never been known to convey typhoid fever unless it was contaminated after cooking, and such contamination by typhoid carriers is now well known. This outbreak must therefore have been due to someone employed in the kitchen who was infected with the paratyphoid bacillus. It was found that a cook had an illness for some days before June 10th characterised by lassitude, headache, anorexia, and pains in the limbs. He was so ill that he sought medical advice, but he remained at work. Examination of his stools revealed the paratyphoid

bacillus of the type B in notable quantity, and the same result was obtained many times in August, September, and October. He also gave the serum reaction for the bacillus. Evidently his illness was a mild attack of paratyphoid fever and after recovery he remained a paratyphoid carrier.

A HITHERTO UNRECOGNISED CONSTITUENT OF TOBACCO SMOKE.

THE toxic constituents of tobacco smoke would appear to be legion, and recently one other quite definite substance has been added to the number, although there is no proof that it is a directly poisonous substance. The category hitherto included a formidable array of poisonous substances such as carbon monoxide, prussic acid, nicotine, pyridine, sulphuretted hydrogen, carbolic acid, and so forth, and now it may be easily demonstrated that there are present also thiocyanates or sulphocyanides presumably of ammonia. It is well known, of course, that sulphocyanide of potassium is usually a constituent of saliva, but its rôle apparently has not been defined. Although, however, cyanogen is present in the salt it does not appear to be poisonous, for in the modern language of the ionic theory the cyanogen group is combined with sulphur to form the anion SCN. The cyanates are similarly non-poisonous since the anion is not CN but OCN. Arsenic and mercury, again, are relatively speaking non-toxic in the form of complex salts such as the cacodylates, atoxyl, and so forth, because the arsenic and mercury exist in a complex ion instead of, as in the case of the arsenites or mercurials, in a simple ion in which the identity of the metal is not lost. The new discovery does not therefore necessarily intensify the evils of tobacco smoking.

INTRACRANIAL PSEUDO-TUMOURS.

IN THE LANCET of Feb. 19th. p. 496. Mr. Richard Roper of the St. Marylebone Infirmary reported a case of spinal meningitis resembling tumour of the spinal cord; laminectomy was successfully performed and recovery ensued. At the operation all of a pathological nature that could be discovered were adhesions between the spinal dura mater and the pia arachnoid. The clinical picture of the case was highly suggestive of compression from a spinal tumour, and operation was undertaken for this reason, with the above-noted result. Such cases are not unusual, and the number of reported instances has increased since attention was drawn to the subject by Sir Victor Horsley. In not a few the adhesions matting the membranes together have produced a sort of cystic collection of cerebro-spinal fluid (though this was not noticed in Mr. Roper's case), which acts mechanically on the spinal cord as a compressing agent. To the condition the somewhat undesirable title of "spinal pseudo-tumour" has been given, but the expression "meningitis serosa circumscripta" is preferable, as in some of the reported cases that exactly expresses the state of affairs found at the laminectomy. At intervals, for a number of years back, instances of what may prove to be an analogous condition involving the intracranial contents have been published, but in these the symptoms have naturally been more diversified. The general signs of intracranial pressure have been present in the shape of headache, giddiness, vomiting, and optic neuritis, and focal signs also have not been wanting, yet at operation or at necropsy no traces of a cerebral tumour have been found. In the light of knowledge gained from a study of the spinal cases we may well expect that a meningitis serosa circumscripta may occur intracranially, but at present information on the point is particularly meagre. That pseudo-tumour cerebri is no rarity is evidenced by a paper on the subject from Dr. Finkelnburg and Dr. Eschraum, which appeared in the *Deutsche Zeitschrift für Nervenheilkunde* for 1909. These writers noted seven cases where the diagnosis of intracranial tumour was inevitable; in one the symptoms pointed to a right cerebellar situation for the tumour, and the patient was trephined. Death ensued eight days afterwards, but post mortem neither tumour nor hydrocephalus was found; indeed, there was no recognisable pathological change. In the other cases, most of which, in addition to the ordinary triad of tumour symptoms, presented cerebellar localising signs, prolonged treatment with iodide made no appreciable difference in the condition, yet complete recovery followed in practically all, and in some has been maintained for years. It is no doubt conceivable that a small tumour may become latent and the symptoms due to its presence may vanish, but several of the cases reported by these German writers suggest that there is some pathological condition with which we are not familiar which simulates intracranial tumour, but from the point of view of prognosis is widely different, and it is possible that a consideration of the analogy between these and the spinal cases specified above may prove of some value.

THE CONSTITUENTS OF COLOCYNTH AND OF RED CLOVER FLOWERS.

TWO interesting pharmacological papers from the Wellcome Chemical Research Laboratories appear in the February number of the *Journal of the Chemical Society*. The first, by Frederick B. Power, Ph.D., and C. W. Moore, B.Sc., deals with the constituents of colocynth, which, although used in medicine for a long period, does not appear to have received a complete chemical examination. The extract of the fruit pulp yielded (1) a new de-hydric alcohol—citrullol; and (2) an amorphous alkaloidal principle possessing an extremely bitter taste and representing one of the purgative principles of the fruit. The resinous substances insoluble in water gave ether and chloroform extracts which possessed marked purgative properties even after removal of the active alkaloidal principle. The outcome of the research appears to be that the so-called "colocynthin" and "colocynthitin," as well as the other products obtained from colocynth by previous investigators to which specific names have been attached, consist of mixtures of a very indefinite character, and that the amount of glucosidic substance contained in the fruit is extremely small. On the other hand, it has now been ascertained that the purgative action of colocynth is due to at least two principles, one of which is alkaloidal, although a very weak base apparently incapable of forming any crystalline salts, while the other source of activity is represented by some non-basic principle or principles contained in both the ether and chloroform extracts of the resin. No evidence could be obtained of the presence in colocynth of β-elaterin, which constitutes the physiologically active constituent of the fruit of Ecballium elaterium. The paper on the constituents of red clover flowers is also by Frederick B. Power, associated with A. A. Salway, B.Sc., Ph.D. Red clover flowers (Trifolium pratense) appear to have been used medicinally for their assumed alterative properties and have even been recommended in cancer. They are mentioned in the National Standard Dispensatory (United States Pharmacopœia, 1905). The constituents yielded were chiefly an essential oil containing furfuraldehyde, sugar, salicylic and p-coumaric acids, a new yellow compound, $C_{16}H_{10}O_7$, iso-rhamnetin, phenolic substances, glucosides, trifolin, rhamnose, and a glucoside of quercetin. A resinous material was obtained equal to 5·6 per cent. of the weight of the dried clover flowers. This yielded certain definite compounds, including alcohols and fatty acids,

saturated and unsaturated. There is no record of any physiological experiments having been made with any individual member of the successfully isolated products which might have thrown light on the popular assumption that red clover possesses medicinal (chiefly alterative) properties.

THE ELECTIONS TO THE ROYAL SOCIETY.

THE Council of the Royal Society have recommended for election into the society 15 new candidates, among whom are Sir William B. Leishman, the Professor of Pathology in the Royal Army Medical College, Dr. A. E. Garrod, Dr. F. A. Dixey, and Mr. H. G. Plimmer. Sir William Leishman is well known in connexion with the discovery of the Leishman-Donovan body of kala-azar, with a method of estimating the opsonic index, with researches on the spirochætes of relapsing fever and tick fever, and has also taken great interest in antityphoid inoculation in the army. Dr. Garrod has won well-deserved distinction for his work in connexion with errors of metabolism, urinary pigments, alkaptonuria, and cystinuria. He has been Croonian lecturer and Bradshaw lecturer at the Royal College of Physicians of London, and we have had the honour of publishing his pathological work in our columns. Mr. Plimmer is well known in two pathological connexions—namely, as a worker in the etiology and histology of cancer, and as an investigator in connexion with the trypanosomata of sleeping sickness and the natural history of tsetse-fly disease. There is a circumstance attached to Mr. Plimmer's election which we consider particularly important. His ingenious and severe labours in connexion with the pathology of cancer were negative in result and might therefore have escaped recognition. It is, we think, much to the credit of the Royal Society that the value of this work has not been lost sight of. Mr. Plimmer's labours represent a phase in the investigation which had to be gone through and which, being accomplished, cleared the ground both for himself and for others for future work. Such efforts should be rewarded and perhaps all the more is this the case because superficial people may estimate them wrongly. Dr. F. A. Dixey has been demonstrator of physiology in University College, London, and in the University of Oxford, and is President of the Entomological Society of London; his more distinctly medical work has been in the fields of epidemiology and vital statistics. To all four of our medical brethren we tender our congratulations, and no less to Professor G. C. Bourne, Linacre professor of physiology at Oxford.

THE FLUSHING OF ENTERIC FEVER PATIENTS.

OUR Budapest correspondent has sent us an account of a paper read by Dr. Mayer on Water Drinking as a Treatment for Typhoid Fever. He said that medical men have for long recognised the value of the free administration of water in this disease and it is common to ask the patient to drink at least one litre in the day. He has recently, however, made an interesting trial of the effects of giving greatly increased quantities of water during the course of typhoid fever. By the regular administration of about five ounces of water every 15 minutes during waking hours (as first suggested by Dr. H. Cushing in America) he was able to give each patient from 8 to 14 pints of water per day, in addition to about 3 pints of other fluid, which usually consisted of milk and albumin water, the water used being filtered river water. These apparently enormous quantities of fluid were taken with ease, and naturally produced a marked increase of the urinary secretion. This polyuria, after the second day of the treatment, was found to keep very exact pace with the amount of fluid ingested, although any considerable diarrhœa or sweating would, of course, upset the correspondence for the time being. As a therapeutic means of diminishing toxic symptoms, Dr. Mayer has great faith in copious water drinking for typhoid fever, and has had an experience of more than 100 cases treated in this way. Under this system he says that headache is much less common; the general comfort of the patients is increased; the tongue and mouth remain clean, and nausea is unusual. Restlessness, sleeplessness, and delirium cause less trouble, while the bath, which Dr. Mayer uses in his practice whenever a patient's temperature reaches 38° or 39° C., was but seldom necessary. Contrary to expectation, the movements of the bowel were practically unaffected by the water treatment. The patients themselves soon came to like the treatment, and in many cases voluntarily increased the amount of water taken. The method was rational, since it was natural to expect a good result by the constant dilution of the toxic blood, and, being very simple, he considers it worthy of a wider trial. We can endorse his plea from a knowledge of cases treated in this country by the same rational method.

THE next International Congress of Hygiene and Demography was originally announced to take place in Washington, D.C., in September-October, 1910. In a letter dated Jan. 29th, 1910, the Secretary-General of the Congress, Dr. John S. Fulton, announces that it has been decided to postpone the holding of the Congress until 1911 or 1912.

THE Secretary of State for the Colonies has appointed Mr. W. D. Ellis of the Colonial Office to be a member of the Advisory Committee on medical and sanitary questions connected with the British Colonies and Protectorates in Tropical Africa.

THE plague returns from Mauritius are more reassuring. Only 8 cases with 3 deaths were reported during the week ending Feb. 24th.

Sir Victor Horsley, F.R.S., has been appointed a foreign associate of the French Academy of Medicine.

FROM Jan. 29th to Feb. 12th 35 cases of glanders in London were reported.

THE QUEEN'S UNIVERSITY OF BELFAST.—The following extern examiners for this year were appointed at a meeting of the Senate on Feb. 26th. They are all eligible for reappointment for three further academic sessions:—Experimental Physics: Professor J. A. McClelland. Chemistry: Professor H. Ryan. Zoology: Professor J. C. Ewart. Botany: Professor F. O. Bower. Anatomy: Professor A. F. Dixon. Physiology: Professor E. A. Schäfer. Pathology and Medical Jurisprudence: Professor G. Dean. Medicine: Dr. F. Taylor. Surgery: Mr. Jonathan Hutchinson. Midwifery: Dr. R. P. Ranken Lyle. Materia Medica: Sir Lauder Brunton. Ophthalmology: Mr. E. Treacher Collins. Hygiene: Professor H. R. Kenwood. The following were appointed local University clinical examiners:—Medicine: Dr. W. Calwell. Surgery: Dr. J. W. Browne. Midwifery: Dr. A. Dempsey. Ophthalmology: Dr. W. M. Killen. Dr. Jack has been appointed an intern examiner in physics, Dr. J. A. Milroy in biochemistry, Dr. A. W. Stewart in organic chemistry, Dr. C. E. Shaw in ophthalmology, Dr. W. J. Wilson in hygiene, and Dr. W. St. C. Symmers and Dr. T. Houston in medical jurisprudence.—The Belfast University has passed the following resolution:—

That the Medical Faculty of the University be requested to advise the Senate as to the appointment of its representative on the General Medical Council.

This arrangement will give the Medical Faculty their due weight in a very important matter.

THE MEDICAL TREATMENT OF THE POOR:

AN ADDRESS BY Dr. J. C. McVAIL.

ON Feb. 21st Dr. John C. McVail delivered an address on the Medical Treatment of the Poor before a convention of Sheffield societies, based on the experience gained in the course of an investigation into out-door and indoor Poor-law medical relief in various rural and urban localities in England and Wales made on behalf of the recent Royal Commission on the Poor-law. He considered first the deficiencies of the present system of relief, dwelling upon the various classes affected under the headings of A., Adults: (1) the Aged; (2) the Middle-aged or Adult Paupers. B. Children: (1) Medical Treatment of the Young; (2) the Children of the "Ins and Outs"; (3) Widows' Children. He dwelt especially upon the lack of simply trained nurses for patients receiving out-door relief, and the desirability of the compulsory removal of certain paupers from unhealthy and neglected surroundings to proper institutions; the delay in seeking medical advice which so often marks the commencement of chronic disease amongst the adult poor; the disadvantages of institution life for children; and the anomalous nature of the present arrangements for the upbringing of pauper children. Our readers are aware from their own experience in practice, from the Reports of the Poor-law Commission and the valuable evidence taken thereat, and from our digests of these Reports and their appendices, how crying are the evils in question.

Dr. McVail then passed on to discuss the remedy for the existing evils in the following terms:—

Recommendations Applicable under Existing Authorities.

What, then, is the remedy for these very serious defects in the medical treatment alike of the pauper and of the poor man and his family who are not paupers? As bearing on Poor-law medical relief, strictly so-called, I made a series of recommendations to the Royal Commission which can be indicated here only in the briefest outline. If local authorities are to remain as at present, the central authority should be greatly strengthened and take a much more active part in local management. But otherwise, and preferably, the local authorities themselves should be altered and strengthened so that they would need not more but less interference from headquarters. For this and other reasons the existing areas of Poor-law administration, medical and general, should be much enlarged. The enlargement should be such as to give each local authority control over several institutions, so that the feeble attempts at separation of different classes of inmates in work-houses should be given up, and that there should be a separate institution for each class. Next, there should be increased medical inspection of all such institutions on behalf of the central authority. At the same time and even more important, systematic medical inspection of all persons in receipt of outdoor relief should be instituted by the central authority. The object of such inspection should be to see that prevention as well as cure was being fully kept in view. The reports of the inspectors should deal with the work of the medical officers and nurses, the sufficiency of the staff and of its remuneration. Medicines and medical appliances should be paid for quite apart from the salaries of the medical officers. Midwifery fees should be revised and a uniform sum fixed. Existing institutions should be the subject of special inspection and report by an architect and medical officer in regard to structural defects and their removal. The plans of new institutions should be more thoroughly examined by the central authority than appears to have been the case in past years. All pauper cases of phthisis should be notified to the medical officer of health, and the sanitary circumstances of the houses where pauper phthisis exists should be observed and dealt with. (I am glad to see that by order of the Local Goverment Board notification of phthisis by the Poor-low medical officers to the medical officer of health has now been instituted.) Boarding out of phthisis cases in country cottages should be encouraged. Colonies for epileptics should be established. Imbeciles should, so far as practicable, be boarded out in the country, and where institutional treatment is necessary the workhouse ought not to be the institution. Cases of curable insanity coming under the Poor-law, such as alcoholic or puerperal cases, should not immediately be sent to asylums, but should be treated for a period in hospital, so that if possible the stigma of insanity would not afterwards attach to the patients or to their families. If local authorities send persons requiring medical assistance to general and special hospitals they should make a proper contribution to the funds of these hospitals, with a view to the medical staff being remunerated for their work. Where such hospitals are not reasonably available, either in rural or urban districts, they should be provided if necessary. Rate-supported outdoor dispensaries should be properly equipped. Maternity wards in infirmaries should be open to married women in poor circumstances though not paupers. Compulsory removal to and detention in institutions should be possible in proper cases and under due restrictions. Many of the present "ins and outs" should be detained for lengthened periods, so that if feeble-minded they would be protected against their own infirmities, and if vicious or lazy would be compelled to work in labour colonies. Dependents of able-bodied persons should be received into institutions if their remaining at home would require that their able-bodied guardian would have to stay off work. The granting of medical orders and of medical extras should be better regulated. All nuisances and insanitary conditions observed by the officers of the Poor-law should be intimated to the officers of the health authority if the two authorities are not to be amalgamated. Where medical relief is afforded disobedience to instructions should be penalised in some way. Cripples and blind persons should be educated so as to aid them in self-maintenance. Children should not be maintained in work-houses, and institutional life in general should be avoided in their case. Scattered homes and boarding out should be encouraged. The children of widowed mothers should be under sufficient medical inspection, should be sufficiently fed and housed, and should be reared in the country so far as possible.

Such are, in very condensed synopsis, my recommendations so far as within the strict limits of the Poor-law, but entirely exclusive of the very important question of the constitution of the local authority, which would easily take a lecture to itself and cannot be touched on here. Any remedy, however, for the existing defects in the Poor-law medical system must, in order to be successful, take cognizance not merely of paupers, but of poor persons who have not reached the stage of pauperism, and whom it is desired to prevent from becoming unfit to maintain themselves owing to ill-health.

A Free Medical Service.

One remedy which has been thought of is an entirely free National Medical Service open to all, the medical men being paid out of public funds. At first sight this may seem a tempting prospect, and it need not be denied that the physical health of the country would be improved by everybody having a right to skilled medical assistance whenever he might choose to ask for it. But more than mere physical health has to be kept in view, and it seems to me that there are strong objections to any such scheme. The common analogy is with free education. It is urged that as the State pays for education because it is desirable that the community should be educated, so ought it to pay for health because it is desirable that the community should be healthy. But, as I pointed out in my report to the Royal Commission, education is only for the young, to prepare them to fight their own battle in life, while free medical attendance would apply from the cradle to the grave. Also, if medical attendance should be free, so likewise should the supply of medicines without which attendance may be of no use. But it is difficult to distinguish between medicines and food, such as milk, beef-tea, butcher meat, and so forth. Both quantity and quality are of moment here, and the State should be responsible. Similarly, warm clothing is of value in the prevention and cure of many ailments. Again, a roomy and well-ventilated and sufficiently furnished house does much both for prevention and cure. Likewise, every one should have a summer holiday in order to recuperate after the winter's work. In short, the vista opened up by any proposal for a free State Medical Service is nothing short of endless.

Such a service would, I think, be found to have a bad influence both on the medical profession and on the public. To place the former at the beck and call of everyone who

might choose at any hour of the day or night to demand his help and to leave him open to the criticism of every crank holding peculiar views as to disease and its treatment, would make the doctor's life not worth living, and would go far to destroy his practical and scientific interest in his work. Medical attendance obtainable in this way would often be little valued by the recipient. Advice so given would be readily neglected. Manifestly, too, the State would be placed in a difficulty, as every faddist in the country would hold that his own bone doctor, or acetopath, or herbalist, or whatever kind of irregular or unqualified practitioner he might fancy, should be provided for him free of charge, and it would certainly be urged that no particular school of medical doctrine, however repugnant to common sense, should be excluded from the State service. Being of opinion myself that apart from charity, personal payment for personal service is good alike for the man who pays and the man who is paid, I have no hesitation in setting aside any scheme of a complete free medical service as having drawbacks which would very largely neutralise its benefits.

Medical Insurance.

How, then, can the man with a comparatively small income—the clerk, the artisan, the miner, the railway servant, the labourer—pay for medical attendance for himself and his dependents? For all the ills which afflict humanity there is no complete remedy, yet in principle the answer is apparent. The risk of requiring to call in a doctor, and to incur prolonged expenditure too heavy to be raised from ordinary income and too uncertain to be reliably provided against by personal savings, belongs to the great group of contingencies which in civilised life are met by means of a system of insurance. Now, insurable risks may for the present purpose be divided into two classes. Where fire or life or burglary, or loss of vessels at sea, or employer's liability is concerned, only the individual or the firm or company is for practical purposes regarded as being liable to financial injury by incurring loss, and he or it therefore is left to pay the whole premium required to cover the risk. But some States are beginning, or have begun, to act on the doctrine that there are certain other dangers in which the public are very directly concerned jointly with the individual. Workmen's insurance in Germany is, of course, the leading instance, and there are movements in the same direction in this country in respect of unemployment and invalidity. In such matters the cost of insurance, it is held, should be borne partly by the individual and partly by the public. Undeniably, the health of the population is a matter both of national and of personal consequence, and in my view the principle of subsidised insurance should be applied to the provision of medical advice and attendance for the wage-earning or poorer classes. The individual and the State should bear the joint outlay for the joint benefit.

That is the first point. The next is that, though at present the State does not contribute, excepting through the Poor-law, and then only when ill-health has resulted in destitution, yet two or three millions of the working-classes have themselves made some provision of the sort by means of the medical benefits to which they are entitled through the great friendly societies. They pay into these when they are well, so that they may be able without hesitation to send for the doctor when they are ill. These societies, however, are subject to serious defects. The so-called slate clubs which break up yearly are of course quite out of the question and may be put aside at once. But even the great friendly societies pay their doctors so poorly that there is constant dissatisfaction. Also, as a rule, they admit only men, or men and boys, seldom females of any age. Nor do they exist everywhere, and many who might be willing members are outside the sphere of their operations, especially in rural districts. They provide, of course, not merely medical attendance but also a money allowance during illness, and sometimes owing to insufficient contributions in proportion to the benefits given or to bad management they become bankrupt. A Parliamentary return, obtained in the year 1891, showed that 4593 paupers at that time had been members of friendly societies which, owing to lack of funds, had ceased payment. Another defect is that the societies provide no choice in the way of medical attendance. Each has its own doctor, and if a member loses faith in him there is constant dissatisfaction from the patient's point of view and also from the doctor's, for one grumbler will give as much trouble as a hundred contented members. Yet the system is right in principle and only the application of the principle is at fault.

Medical Provident Institutions.

My own view is that medical provident institutions should be established all over the country and that the State should contribute to their maintenance. The individual should make his own contribution in the interests of his own health. The State should make its contribution in the interests of national health, including the prevention of pauperism, and the united contributions should be such as to afford fair and reasonable payment for the medical services rendered. All medical men within the sphere of work of any such institution should have opportunity of being placed on the list of its doctors. The members should have the selection annually of their medical attendant from this list. Each institution should be managed by a committee representative partly of the members, partly of the doctors, and partly of the State. If the State made no contribution manifestly it would have no right to share in the control. The committee should have the power of removing from the list of doctors any man who might be found endeavouring to attract members by improper methods, such as by underselling—by offering to return to them a proportion of their contributions.

In devising any such scheme the interests of the great friendly societies would have to be respected. If in some places the institutions could be directly connected with societies such an arrangement might be made. Otherwise, the societies might delete medical attendance from their benefits, their members paying separately into the medical provident institutions for that purpose. It is well known that a friendly society is sometimes found to be actuarily unsound. In such a case legal provision might be made for its continuing to charge on the existing scale while ceasing to provide medical benefits, so that in this way the income might balance the diminished expenditure. This is the merest skeleton of a scheme, and as to its details, even as to essential details, a score of difficulties may be suggested, and a hundred questions may be asked. But I altogether object to criticism based on the well-known fact that sick clubs in the past have had many faults and many failures. There is no fair or reasonable analogy between such clubs and the suggested medical provident institutions. Indeed, to argue from the one to the other is simply to raise an entirely false issue. That medical officers on the institution list would endeavour to attract patients by pandering to a public taste for large quantities of medicine, and would so enter on a degrading competition in excessive drugging, is a suggestion which could easily be deprived of any validity by providing that patients should be charged the wholesale price of medicine supplied to them at the institution's dispensary. A competent committee would soon learn how to deal with any such abuses, and the assumed contribution by the State would involve its right to exercise reasonable supervision over the medical work done by the institution. Even the fact that medical provident institutions have not always been very successful does not in the least show that, established and managed on the suggested lines, the result would be other than satisfactory. The scheme has to be judged on its merits, not on the demerits of others.

A Voluntary System.

One question of the utmost importance is whether membership should be compulsory or voluntary. Any voluntary scheme would obviously be incomplete, but subject to a reservation which I shall mention later compulsion would result in much difficulty, and a new class of conscientious objectors, including faith-healers, "Christian Scientists," and all who put their trust in quackery, would come to the front. In the absence of compulsion, what would be the inducements to membership? They would be both direct and indirect. The former would include the State contribution, the choice of doctors, the good management which should be looked for from committees so constituted, and the good work which the institutions would quickly prove themselves capable of doing. A very important indirect inducement I would expect to find in a much increased stringency of inquiry by medical charities in general as to whether applicants for their aid were not in a position to attach themselves to provident institutions.

Indeed, the better government of such charities in this respect is practically essential to any such reform, whilst the establishment of medical provident institutions would at the same time make reform much easier. The out-patient departments of the great hospitals would obviously be in a much stronger position than at present to refuse assistance to persons obviously able to become members of provident institutions. But cases requiring very special treatment, such as Roentgen rays or Finsen light, would still probably have to attend at the out-department of great hospitals, though in course of development some provident institutions might themselves make such provision for their members. So also the provident institutions, State-aided, might ultimately, if necessary, provide hospitals for their members, or might, in cases in which institutional treatment was required, facilitate their reception into existing hospitals.

No doubt many labourers would find it a heavy burden to provide the members' shares on behalf of himself and his wife and family, but charity could quite well step in here, as it does in the coal and boot and clothing clubs of many an English village. Entire or partial payment of such contributions would be an admirable purpose to which to devote some part of the funds collected by charity organisation societies. At the other end the question of a wage-limit would have to be considered, but the limit would depend on the amount of contribution per member. Control would have to be exercised over the admission of persons already suffering from illness, but the control would have to be reasonable. The admissions would usually be of families, not of individuals. It would be out of the question to let the head of a household select for admission such of its members as would most likely require medical attendance. On the other hand, a weakly or ailing member could not be excluded if the rest were accepted, and a household could not be shut out on account of a single member. Such difficulties could, no doubt, be settled on a financial basis. Single individuals without dependents would, of course, be admitted singly. An entry fee would be advisable and the annual charge would depend to some extent on the age at entry. Each institution would, as a rule, have its own drug dispensary.

Medical Treatment of Paupers.

As regards paupers (I use the word for convenience), whatever might be the nature of the new local authority I do not see why their medical treatment should not be obtained through such provident institutions. The local authority would contribute to the institutions in respect of all for whom it might wish to provide medical attendance in that way. And if the pauper were already ill then, instead of entering as an ordinary healthy member, the amount of the contribution on his behalf would have to be increased. Concerning the choice of a doctor in cases introduced either by public or private charity, or by the local authority, I am clearly of opinion that it should lie with the contributor and not with the patient, the principle being that he who pays the piper has a right to call the tune. Also, if any such scheme were organised, the existing Poor-law medical officers, who, being in general practice, would no doubt along with other members of the profession be on the medical provident list, should be selected for attendance on pauper cases. But at the death or resignation of such a medical officer it might perhaps be unnecessary for the local authority to appoint another in his place. They could select from the institution's list as they might from time to time think fit, or else they would make a definite appointment. But any such relationship of local authorities to medical provident institutions is not an essential part of the scheme. If good reason could be shown for an authority paying a medical officer of its own, it might continue to do so, and the provident institution would exist independently. So far as I can see, however, the suggested connexion would be the better arrangement. The work of attending paupers would be much better paid than at present, and at the same time there would be economy in general management.

It might indeed be argued that this linking of rate-supported relief to provident institutions would repel paying members owing to the traditional stigma attaching to the Poor-law. If that fear were well-founded, then it would be better that there should be no such association. But whatever be the policy followed in providing a substitute for the existing Poor-law, it will certainly include two general objects, first, the controlling of the vicious and the idler or loafer class by means of detention or labour colonies, so that these persons could not be foisted on provident institutions; and second, the avoidance of any procedure which would deter or degrade the really deserving and unfortunate. I do not myself think that the latter ought to be objected to as members of a medical provident institution.

Attraction and Deterrency.

The very puzzling question of how to make Poor-law medical relief at the same time attractive to the deserving and deterrent to the undeserving has been much debated. A national system of medical provident institutions would greatly favour a solution of the difficulties. Members would not require any medical attendance other than that furnished by the institutions, and the greater the membership the smaller would be the residue. The dimensions of the problem would thus be minimised. The residue could by inquiry be broadly divided into two classes, according as their poverty would be found due to misfortune on the one hand or misconduct on the other. The former could be treated through the institutions, the latter perhaps by special officers directly employed by the local authority, if that were thought deterrent. But the medical treatment would have to be as effective in the one class as in the other.

Charge and Recovery.

It may be well to point out that the provision of medical attendance to paupers by means of such institutions would not interfere with the local authority's right of recovery of the cost of such relief from the recipient in so far as he might be found, or might become, able to pay. The powers of charge and recovery would be unaffected. But occasion for exercising such power of charge and recovery would be much less frequent if provident institutions were established and encouraged than if they were wanting. Surely it is better to aid the poorer classes to make provision against sickness whilst yet they are well than to invite them to a life of thriftlessness by announcing that all their needs will be equally well met by the State, whether they have saved or squandered their own earnings, and by adding that those who have saved will be mulcted of their savings, whilst those who have squandered will go scot free. Nor does it need to be pointed out that the amount likely to be recovered from persons who come for relief because they are in ill-health must be comparatively small. Some would become quite well again, and whatever they might earn could be taken from them if they were not lost sight of. Others would be partially restored to health, and might maintain themselves without ability to repay anything. Others, again, would be found permanently incapacitated and would be a chronic burden on the rates. How vastly better it would be, instead of trusting to such chances as these, if by means of provident institutions the cost of medical attendance had been systematically paid for beforehand.

The General Practitioner.

As concerns the very important interests of the medical profession I am satisfied that they would be greatly advanced by a properly constituted national system of provident institutions. The preservation of the general practitioner from absorption in a system of whole-time officers has been a subject of discussion in the professional journals. His position would be properly conserved by his connexion with such institutions. He would be paid, not by salary, but exactly according to the number of his provident patients. Also, an immense amount of work which at present is done gratuitously by medical charities owing to laxity of management would in future be paid for. And so far as the institutions were concerned he would be saved all the worry and annoyance of issuing accounts and endeavouring to recover bad debts.

Invalidity Insurance.

I now return to the reservation referred to in arguing that membership of medical provident institutions would in all likelihood have to be voluntary. If membership is to be by direct individual payment it must, I think, be voluntary. But if, as now appears very likely to happen, a national system of invalidity insurance is established with contributions by the State, by employers of labour, and by employees, and if, further, this insurance is to cover not merely a money allowance during sickness but also medical attendance, then it would be quite feasible to pay for the latter into the medical provident institutions out of the invalidity insurance

funds. This, though it would apply only to workmen and not to their wives and families, would, needless to say, make an invaluable beginning to the whole scheme, and would give an immense impetus to its extension to women and children.

Periodical Medical Inspection.

I have left to the last a point which is not essential, but to which I personally attach importance. In any such scheme every doctor on the institution list should make a periodical, though not necessarily a frequent, inspection of all the members under his charge. The purpose would be to prevent the onset of disease or to check it at its very commencement. I have already pointed out that pauperism frequently results from unrecognised disease, the beginnings of illness being neglected and medical advice not sought until after disease has secured firm footing in the system. Parents (including pauper widows with families entered in the institution by the local authority if that part of the scheme were accepted) would be guided as regards the health and dietary of their children, and suitability of occupations for their boys and girls. Fathers would be advised as to their employment so as to prevent heart strain or the like, and in advancing years an outlook would be kept to minimise the troubles which affect old age. This is no impracticable nor unparalleled suggestion. Every owner of a factory has his steam boiler tested periodically. Many a householder thinks it his duty to have his house drains examined at intervals. Most people who can afford it send their children regularly to the dentist so as to preserve their teeth in good order. There is no reason why the whole bodily system, including the principal vital organs, should not also receive a little attention. Any fear that a brief medical examination once a year or once in two years would result in hypochondriasis seems to me quite baseless. Already a somewhat similar system is being followed in elementary schools, without any such danger being heard of. In passing, it may be noted that overlapping would, of course, have to be avoided in such work of periodical inspection. School children would not need to be examined both by the officer of the provident institution and by the school medical inspector, but that could be easily arranged.

As just stated, periodical medical inspection is not essential, yet it seems to me a distinctly useful part of any complete system of medical provident institutions, and in particular it would help to recompense the State for its contributions to the funds. But even without it these institutions ought to be of great value. Supposing that their membership were at first mainly made up of artisans rather than labourers, there is no reason, but the opposite, why the nation should not do its best to protect the health of its skilled workmen, consistent with the maintenance of personal independence and responsibility. The suggestion of any such national system may be scouted as utopian. The same would have been said ten or a dozen years ago about the medical inspection of school children which is now in actual operation all over England and Wales, and is already regarded as a mere matter of course.

Conclusion.

Concerning the incompleteness of a voluntary scheme, its value is not to be measured apart from other needed reforms. The proper feeding and rearing of pauper children, the control of boy labour, the decasualisation of labour, labour bureaux, unemployment insurance, detention colonies for the vicious and the lazy and for weak-willed ne'er-do-wells, the safeguarding of imbecile or feeble-minded young women by similar detention, the enforcement of every practical check on alcoholic indulgence—all these and other agencies have to be thought of as part of any sufficient plan of reform. Improvement in the general condition of life and labour resulting from such measures would quickly add to the numbers who would be in a position to become paying members of provident institutions. So long as human nature remains what it is no panacea for all its defects can be found, but the simultaneous operation of agencies regarding whose value there is practically unanimous agreement will do much in the desired direction. One of these agencies will be better preventive and curative medical treatment of the poor, and in whatever way that be achieved consistently with the maintenance of personal responsibility I am sure that it will play an important part in the advancement of the national welfare.

MOTORING NOTES.

BY C. T. W. HIRSCH, M.R.C.S. ENG., L.R.C.P. LOND.

Seasonable Precautions.

As long as the early morning whiteness of the streets remains to show that the frosty season of the year is here it is opportune to recall to the minds of motorists the dangess of this inclement period. Should a frost occur and the car be housed in a cold garage the cooling water, if it has not previously been emptied out, may freeze in the jacket, radiator, or pipes, and as the water expands one or all of these portions of the car's anatomy may crack or burst. A common precaution is to empty out all the water every night, but then, though the taps be opened, some of the water may not drain off, such as that in the pump, with the consequence that even if a pipe has not burst part of the pump may be frozen and break when the engine is started up. In addition to the bother of having to fill up with water if an urgent call comes, there is, too, the possibility of an air lock, which may take some time to get rid of before the water circulation can be established. To avoid this some antifreezing compound may be introduced into the water. An efficient method is to add calcium chloride, about 40 ounces to each gallon of water, which gives a solution that will not freeze above 26° F.; 48 ounces to the gallon will be fluid even though the temperature falls to 0° F. The objection to this addition is that the impure salt may cause corrosion of the pipes or water tank, so many consider glycerine a better specific. The adding of 70 fluid ounces of glycerine to each gallon of water will give a solution with a freezing point of 11° F. Most are content with crude brown glycerine and only add 25 per cent., which results in a fluid of 1·066 density, the freezing degree of which is 20° F. 25 per cent. means 53 ounces to the gallon.

The only other alternative is to instal some method of heating the garage. If the electric current is available, an electric radiator answers, especially if it be placed beneath or on top of the water tank. The British Everready Electrical Co., Limited, of Theobalds-road, London, W.C., have brought out a useful little heater, which is inclosed in a metal case, and fits inside the bonnet of the car. It can be supplied for either alternating or continuous current and for any voltage. The Norton stove mentioned in the account of the Olympia Show[1] is also handy. Messrs. Boulton and Paul, Limited, of Norwich, also manufacture an effective heating apparatus.

Lubrication difficulties with modern cars should not occur, as the oil is now in a sump, in the crank case, and so, even if frozen, is quickly rendered liquid when the engine starts and heats the lubricant. With the "drip" method the oil will probably need thinning with a little paraffin so that it may flow readily, or a lighter grade oil can be employed. When filling up with a fresh lubricant it is a good plan thoroughly to clean out with paraffin the oil tank and various oil pipes. Carburettor functional torts are apt to occur as the petrol in the float chamber becomes stale, and in cold weather stale petrol vaporises badly. A good tip is to run off the stale petrol from the float chamber when starting in the morning, and to warm the fresh petrol by pouring some hot water over the float chamber; by this means, even on a freezing day, an engine can be rapidly started. Should there be frozen snow on the ground, one of the detachable anti-skidding devices, such as the studded gaiters sold by most tyre makers, will enable the tyre to grip, even on the most slippery road.

Recently I was trying a car, and though it was snowing when I left home, and I had merely plain tyres, I forgot to take a studded gaiter with me, and I found some difficulty in ascending River Hill. Luckily a rope was at hand; this was twisted round a spoke and then round the tyre, and in this manner each back tyre was converted into a sort of grooved non-skid, and thus equipped the car mounted without a question.

In the *Autocar* of Nov. 27th last I noticed an excellent wrinkle, which is credited to a member of the medical profession, and as I personally know what it is like to hold the steering wheel with the thermometer below zero I recommend

[1] THE LANCET, Nov. 20th, 1909, p. 1534.

what they term the warmest covering for the hands to such motorists as drive themselves—namely, lined woollen gloves next to the skin, overlaid by a pair of fingerless tramway-man's mitts with leather palms.

Metallurgique Cars.

The Metallurgique cars are already well known in this country, and the makers turn out a 12 h.p. model, which they term in their catalogue the "Doctor's Car." The one shown at the recent Olympia Show was fitted with a very smart Victoria body, with a built-up dash, high side doors, a folding screen and a black leather hood, and in the boot at the back there was a dicky seat, which, when folded up, is constructed to disappear. Of course, coach work is not by any means everything, but as in this case it was certainly pleasing I was glad to test if its behaviour on the road could also be described in the same manner. Previously to starting I made a rapid inspection of the leading features, and a review of these may be of interest to such readers as contemplate the purchase of a car.

The four cylinders have a bore of 75 mm. and a stroke of 110 mm., and they are placed "de-saxe" to the centre line of the shaft, which is said to enhance the power of the motor. The crank shaft is of nickel steel and runs in bearings of ample dimensions. The arms of the fly-wheel perform a double operation; besides carrying a wheel of large size they act as a fan, drawing a current of air through the radiator past the motor. The valves are all mechanically operated and the tappets are adjustable. Cooling is by thermo-syphon with a new type V-shaped radiator, and a good point is the ample size of the water pipes. The clutch is on the principle of the internal expanding brake; two phosphor-bronze shoes are expanded against the inner side of a drum in the boss of the flywheel, and all thrust is taken up by ball-bearings. In fact, on this car, wherever it was possible, except for the crank, ball-bearings have been fitted. A good feature is that the clutch can be fairly easily removed, which is not the case on all cars; still this type, I understand, rarely needs adjustment. The gearbox is very compact and light, and the three forward and the reverse gears are worked by a gate change. The top speed is a direct drive. The lubrication is very simple; in the crank base there is a sump which contains the oil filled in to the crank base through a large filter cap; the top of the sump is provided with a filter bed, and as the oil drains back it is strained as it enters the sump. A pump, driven off the timing wheels, delivers oil to the centre and end bearings, and the crank shaft is drilled and thus the oil is forced under pressure to the big end bearings, and then along leads in the connecting rods to the gudgeon-pin bearings. A pressure gauge on the dash indicates if the oil pump is working. Ignition is by a fixed firing high-tension magneto. The brakes, both foot and side, are of the internal expanding type, quite positive, and on the drive I had I found them very smooth and soft on application. The springs which are employed are very long and flexible. The steering column is comfortably inclined, and as a result of ball-bearings on the steering swivels the manipulation of the steering wheel is very easy. As already mentioned, the ignition is fixed, and the speed and power of the engine are regulated by an accelerator pedal. A Zenith carburettor is fitted, which is simple and most efficient. With a two-seated body as much as 30 miles can be obtained with a gallon of petrol.

I took the car for a 40-mile run, and found that it could take average steep hills easily on the second speed; also that it could be easily restarted on that gear when the wheels had actually been brought to rest as a result of traffic. On the first speed it mounted a hill of 1 in 5½ without a murmur, and from my experience I believe that the Brooklands test hill would be an easy matter for this car. The clutch was smooth and the change speeds very easy to manipulate, and I should say that a great deal of traffic work could be accomplished without changing down. My impression was that it was a thoroughly modern, lively, but almost silent, engine, which responds readily to the driver, and that it is in every way an interesting car to drive. The brakes are powerful, and either I found capable of holding the car in both directions on a steep hill. Messrs. Warwick Wright, Limited, also have on the market an 18 and a 26 h.p. model.

The Darracq 14–16 h.p. Car.

Messrs. A. Darracq and Co., Limited, of Walnut Tree-walk, Kennington, and 12, Regent-street, London, S.W., have issued a special descriptive catalogue of this model, which was described in THE LANCET of Oct. 30th, 1909, p. 1303. The car has now been on the road some five months and has, I understand, given great satisfaction. Messrs. Darracq fit ball bearings to the through shaft in the gearbox, and as occasionally on very steep hills, if the petrol tank was nearly empty, the carburettor was rather high for gravity feed, they have altered that part so that now the petrol enters from below the carburettor instead of on top, as was the case in their earlier type; so now, no matter if the tank is low in petrol, there is always enough head to keep the carburettor well supplied. The car can now be had either with an 85 mm. by 100 mm. or an 80 mm. by 120 mm. engine. I have tried both, and I believe that the one with the longer stroke is slightly more powerful, but either gives ample power both for speed on the flat and hill climbing.

THE RECENT MALARIA CONFERENCE IN SIMLA.

THE Secretary to the Government for India has issued to the Secretaries to the Provincial Governments the report of the Proceedings of the Imperial Malaria Conference held at Simla in October, 1909. In an official letter covering this document the Government supports the opinion of the Conference that the epidemiology and endemiology of malaria in India must be investigated in detail, and approves of the organisation for that end outlined in a paper read to the Conference by Colonel J. T. W. Leslie, I.M.S., Sanitary Commissioner with the Government.[1] The circular asks that provincial organisations may be formed to work in coöperation with the central scientific committee proposed by Colonel Leslie, and to send delegates to an annual meeting of a general committee presided over by the Sanitary Commissioner with the Government. Attention is called to the importance of the statistical inquiries recommended by the conference, and the provincial governments are requested to institute these inquiries systematically in their respective provinces. They concern both the people amongst whom malaria is epidemic or endemic and the mosquitoes that infest the different localities. The importance of arriving at the true cause of the presence of malaria in any district before money is spent in attacking a supposititious cause is pointed out, and it is asked that careful notes of all investigations shall be forwarded to the central committee. The Government of India further proposes that a class consisting of one medical officer with one medical subordinate from each province should assemble next spring at Amritsar, or elsewhere in the Punjab, for instruction in field work by Captain S. R. Christophers, I.M.S., who, it is rightly pointed out, "has a very special knowledge and experience" in this branch. The letter finally brings forward the following scheme of work to be done by the Central Scientific Committee:—

A. Routine work at the Central Research Institute.—One of the first subjects for investigation will be the distribution in India of the different species of anopheles. A type collection will be formed at the Central Research Institute and arrangements will be made for the identification of specimens sent by collectors. Instructions regarding the method of making collections will be issued to those requiring them. Biological facts regarding the different species of anopheles will be collated from the reports of provincial workers and others. The comparative prevalence of the different varieties of malarial parasite will be ascertained and a critical examination of blood specimens will be carried out systematically with a view to discovering new species, should such exist. When sufficient information regarding any subject of inquiry is accumulated a bulletin for general information will be issued—e.g., as soon as possible a list of the known species of Indian anopheles will be issued showing the species which are known to carry malaria, those which are suspected of carrying it, and those regarding which any particular information is required.

B. Work in the field and laboratory.—The investigation will be commenced of such questions as the following:—(1) The reason for exemption from malaria of certain tracts in which conditions are apparently favourable to it. (2) The conditions leading to the presence of intense malaria in certain areas. (3) The conditions determining epidemic prevalence. (4) The transmission of malaria: (*a*) The study of the bionomics of anopheles—e.g., their power of flight, the duration of their lives, &c.; (*b*) the effect of multiple inoculations of parasites by the study of culex and proteosoma, &c.; (*c*) the production of gametes in different conditions—(i.) the relation of production to single "attacks," to "relapses," and to the state of "constant infestation" occurring in children in endemic areas; (ii.) the effects of scarcity, temperature, and other conditions. (5) The cause of the resistance to the action of quinine of certain cases

[1] This address was published in full in THE LANCET, Nov. 20th, 1909, p. 1483.

of malaria and the action of the drug on the parasite in—(*a*) simple cases and relapses, (*b*) multiple infections and infestations, (*c*) cases of long-continued malarial infection and enlarged spleen, possibly associated with secondarily induced conditions. (6) The causes of hæmolysis *in vivo*, the production of antibodies and the intimate pathology of malaria. (Such inquiries have a special bearing upon treatment and upon the origin of cases of blackwater fever.) (7) Conditions unfavourable to the life of the larvæ of anopheles, including a study of the action of different kinds of fish. (8) A study of the epidemiology of kala-azar and of other conditions of splenomegaly not apparently associated with the parasites of either malaria or kala-azar. (9) The action of quinine. The effect of the quinine treatment of man in preventing the infection of mosquitoes. The effect of large doses of quinine on the production of gametes, &c.

CAPE OF GOOD HOPE: REPORT ON THE PUBLIC HEALTH OF THE COLONY IN 1908.

WE have received from Dr. A. John Gregory of Cape Town his recently issued report as medical officer of health for the Cape of Good Hope, presenting certain vital statistics for the years 1907 and 1908, together with the reports of the district surgeons on the state of the public health and the sanitary conditions of their respective districts during the year last mentioned.

Constitution of Department of Public Health.

In the year 1907 the office of the medical officer of health of the colony was constituted a separate "department of public health" under the control of the medical officer of health as administrator of all matters relating to public health and sanitation. In the course of the year following the sub-department of the Cape Registrar-General was abolished, and the registration of births, deaths, and marriages, together with the preparation of statistics relating thereto, was transferred to the new public health department. To this department was likewise transferred the greater part of the local administrative work, including the oversight of public affairs of a purely medical character, the only matters relating to "public assistance" that were still retained in the office of the Colonial Secretary being those concerning State-aided hospitals, asylums, and institutions for the care of sick paupers.

In a prefatory letter Dr. Gregory disclaims all attempt to analyse in the usual manner the vital statistics of the colony, for the sufficient reason that no trustworthy information is available respecting the population with which the births, deaths, and marriages may be compared. Although, for this reason, it is as yet impossible to make reliable deductions from the returns of birth, death, &c., Dr. Gregory has thought well to publish, as an appendix to his report, a tabular statement of the number of births and deaths registered in 1907 and 1908, so that calculations of ratios therefrom may be promptly made as soon as the results of the census, probably to be taken in 1911, are available. It will readily be understood that the organisation of the work of a newly constituted department has led to some delay in the publication of the director's report; but this is more than compensated for by the fact that, in consequence of the transfers already indicated, the report contains, for the first time, particulars of the births, deaths, &c., for the actual year to which it relates, instead of for the preceding year, as heretofore. As, however, the next annual report will be the last before the Act for the Union of South Africa comes into operation, the medical officer reserves for that occasion a comprehensive review of the work of his department, including, of course, complete statistics of marriage, as well as of natality and mortality, for the colony and its several subdivisions. From the reports recently presented to the Cape Government it is clear that the transfer of administrative work to the Health Department has resulted satisfactorily in all respects, and has received the approval of the central as well as the local authorities throughout the colony. Under the Public Health Acts the duty of dealing with sanitary matters devolves on the local authorities, with a minimum of central interference. Inasmuch as most of the operations of the local authorities have more or less bearing on public health, it follows that the Health Department necessarily comes in contact with those authorities everywhere, so that the recent transfer has resulted merely in extension of the original functions of that department. The arrangement, however, has certain special advantages. In the first place, it coördinates under one head the work of local government, so that the local authorities now deal with the centre through a single recognised channel. Secondly, it conduces to efficiency, because, in dealing on the spot with insanitary conditions, the department becomes familiar with local peculiarities and local needs, and consequently is able to manage satisfactorily as well as economically matters requiring exceptional treatment. And lastly, by regulating the work of local authorities on uniform principles, conflicting decisions are avoided, and better as well as more expeditious results are attained. In discussing the various aspects of public health administration in the several districts of the Colony Dr. Gregory writes appreciatively of the conduct of the local magistrates and also of the district surgeons, upon whom devolves much responsibility in relation to matters of public health. Especial mention is made of the zeal, tact, and discretion wherewith the important duties of the district surgeons are discharged, in spite of the fact that the conscientious fulfilment of those duties often conflicts with their private interests as medical practitioners.

General Improvement in Sanitary Administration.

Commenting on the state of the general health of Cape Colony in 1908 the medical officer of health draws attention to the carefully prepared reports of the district surgeons, on the health of their respective districts, which appear as appendices to his report. These local reports are scrutinised in the central office, and all matters referred to as requiring improvement are promptly referred to the proper quarter for attention. Dr. Gregory reports that the local authorities throughout the colony are gradually attaining a better standard of health administration, which cannot fail to be reflected in a diminished incidence of sickness and of mortality. "Nevertheless," he observes, "most of them have yet a long way to travel before they reach anything approaching a thoroughly satisfactory position. It must, however, be admitted that local authorities in South Africa, while they escape many of the problems which trouble local authorities elsewhere, are assailed with difficulties which more than counterbalance those from which they escape—chief among which is the possession of a native and coloured population with its ignorance and its insanitary and uncivilised habits."

Prevalence of Infectious Disease.

Cape Colony has followed closely in the wake of the mother country with respect to legislation for the protection of the people against preventable disease. In the year 1907 an Act was passed requiring the notification by medical practitioners of specified kinds of infectious disease, notwithstanding which it is not surprising to hear that hitherto the returns of such cases have been very incomplete, by no means conveying an accurate idea of the extent to which the community suffer from these maladies. In the absence of information respecting the numbers of the population it is, of course, futile to discuss the relative prevalence of diseases in Cape Colony. Nevertheless, the report contains particulars of the reported attacks by the several notifiable diseases. Small-pox appears to be very prevalent, especially among the coloured races. Scarlet fever is noted as spreading irregularly from year to year, much in the same way as it does in this country. It appears that the most rudimentary precautions against the spread of infection are generally ignored. As a flagrant instance of this a case is cited in which some 30 persons were found attending a religious service in a small stuffy room in which was the corpse of a child dead of scarlet fever. Enteric fever also is much in evidence, and the report contains an interesting account of investigations by the Health Department as to the origin of several outbreaks of the disease in the year 1908. The disease appears to be commonly waterborne, and Dr. Gregory gives accounts of several epidemics traced to sewage-polluted water or to unboiled milk adulterated with water from specifically contaminated sources. Pulmonary tuberculosis is recorded as of frequent occurrence among the native inhabitants of the Cape, but for the reasons already given it is impossible as yet to compare its relative prevalence in that colony with our experience of it at home.

THE POOR-LAW MEDICAL OFFICERS' ASSOCIATION AND REFORM OF THE POOR-LAW.

THE Poor-law Medical Officers' Association is trying to obtain from its members information upon which a scheme of Poor-law medical reform may be constructed in accordance with the ideas of the existing Poor-law medical service. Members of the Poor-law medical service have received from the honorary secretary of the Association the following schedule of questions, with an urgent appeal that they may be answered at once, and thus enable the Association to estimate with some accuracy the real opinion of the whole service. In every case a stamped envelope has been enclosed for an answer, so that the minimum of trouble has been given to those whom it is desired to help.

Questions Submitted to the Poor-law Medical Service of England and Wales.

1. Are you in favour of the abolition of boards of guardians throughout England and Wales?
2. What authority would you propose to administer public medical assistance in the interests of the public and the medical profession? (*a*) A specially elected "ad hoc" authority? (*b*) A Statutory Committee of the County Council, as suggested in the Majority Report of the Royal Commission? (*c*) Abolition of any special Poor-law authority as recommended in the Minority Report?
3. Should any difference be made between medical, and other public relief, beyond non-disfranchisement in the case of the former?
4. Should there be any "test" or "deterrent" such as the present medical order to regulate the granting of medical relief to poor applicants? Or should the latter be permitted to claim public assistance subject to no other liability than having to pay the cost of the same if proved to be in a position to?
5. Are you in favour of a public assistance medical scheme based on provident dispensaries subsidised by the State and contract practice generally?
6. Are you in favour of a public medical service, based on an amalgamation of the present Poor-law Medical Service, with the Sanitary Medical Service?
7. Do you approve of the district medical officer being made relieving officer so far as medical relief is concerned?
8. Are you in favour of "whole time" or "part time" appointments in any reformed public assistance medical service?
9. Are you in favour of a reform of the present Poor-law system? Or would you prefer a "break up" of the present system?
10. Do you think the needs of the State sick poor would be better attended to by a distinct and separate medical service? Or by a sanitary service in which Poor-law medical officers were blended with medical officers of health?
11. Do you think that a "Unified Medical Service," that attended to all "poor" applicants with no other test, or deterrent than the liability to be compelled later to pay the cost of the same, would, or would not, be dangerous to the interests of all general practitioners in poor districts?
12. Enumerate the reforms that in your opinion are required in the Poor-law Medical Service as at present existing.

A covering letter, signed by Mr. D. B. Balding and Dr. Major Greenwood, respectively chairman of council and honorary secretary of the Poor-law Medical Officers' Association, points out that in the present critical condition of the Poor-law system of the country a strong organisation of existing Poor-law medical officers should be promoted. "So that the interests of the present officers may be safeguarded, whatever reforms may be introduced, and that our service may have its proper influence in guiding public opinion in the direction these reforms should take: to the end that the wants of the sick State poor shall be efficiently attended to without injury to the interests of medical practitioners generally, or unduly pauperising the lower classes of the nation." They proceed to point out that although in the present unsettled political situation there does not seem much likelihood of immediate legislation, there can be little doubt that one of the first efforts of a settled government will be to reform the Poor-law, while they find that both Reports of the Royal Commission on the Poor-laws do the present Poor-law medical service scant justice.

We hope that a large proportion of those concerned will answer the questions, as it is most desirable that an attempt should be made to formulate in the name of the existing Poor-law medical service some scheme of medical reform. The views of the service ought to carry great weight, as having hitherto had entire medical charge of the State poor of the country, while according to the Reports of the Royal Commission the members of the service have not been found wanting in zeal or ability. The questions cannot all be answered either easily or briefly, and in several of them the Poor-law medical officers will have to decide whether their views are held from motives of public policy or from private interest. But any large consensus of opinion from them should have considerable weight.

THE BEIT MEMORIAL FELLOWSHIPS FOR MEDICAL RESEARCH.

THE magnificent endowment of medical research made by Mr. Otto Beit in memory of the late Mr. Alfred Beit is fresh in our readers' memory. No time has been lost in making the awards of the first batch of Fellowships, which will date from March 1st, 1910. There were 70 applicants and 10 Fellowships have been awarded, each being of the annual value of £250 and tenable for three years, which the Fellows undertake to spend in prescribed medical research work in some institution authorised by the trustees. It will be seen from the list of the new Fellows that most of their work is to be carried out in places connected with the University of London. The list in alphabetical order is as follows: Mr. George Harold Drew, B.A. Cantab., Scholar of Christ's College, Cambridge, Schreiner University Scholar, Cambridge, and University Scholar, St. Mary's Hospital. Mr. Drew is official research worker at the Plymouth Laboratory of the Marine Biological Association of the United Kingdom, and will carry out his authorised research at that laboratory and at zoological stations at Naples and at Roscoff, France. He will investigate the zoological distribution of cancer and study experimentally the mode of origin of neoplasms. Mr. Frederick William Edridge-Green, M.D., B.S. Durh., F.R.C.S. Eng., whose investigations into the subject of colour-vision and theories of vision have been described in our columns, and who was formerly adviser to the Board of Trade on eyesight and colour-blindness, and a member of the International Code of Signals Committee, will undertake a research into various problems connected with vision and colour vision at the Physiological Institute, University College. Mr. Edward Hindle, B.Sc. Lond., late demonstrator and research assistant at the Liverpool School of Tropical Medicine and instructor in parasitology in the University of California, has been appointed to investigate the morphology and treatment of protozoal blood parasites, especially spirochæta Duttoni and trypanosomiasis, at the London School of Tropical Medicine and in Uganda. Mr. Thomas Lewis, M.D. Lond., D.Sc. Wales, M.R.C.P. Lond., Fellow of University College, London, and assistant physician to the Seamen's Hospital, Greenwich, will continue important investigations on the mechanism of irregularities of the heart at University College Hospital Medical School. Mr. Gordon Clunes McKay Mathison, M.D. Melb., will enter upon a research at the Institute of Physiology at University College, London, in which he is assistant, upon (*a*) the nervous control of respiration; (*b*) the effect on respiration of changes in the chemical composition of the blood; (*c*) the mechanism of biliary secretion and its general effect in digestive processes. Mr. Otto May, M.B., B.C. Cantab., M.R.C.P. Lond., Scholar of St. John's College, Cambridge, and Research Scholar of the British Medical Association, late demonstrator of anatomy and of physiology at Cambridge and now physician to out-patients at the Evelina Hospital, will undertake a clinical and experimental research upon the lesions of peripheral nerves at University College. Mr. Edward Mellanby, M.A., M.B., B.S. Cantab., scholar and research student of Emmanuel College, Cambridge, at present demonstrator of physiology at St. Thomas's Hospital, will work at that school on the relation of the excretion of creatinin to morbid conditions of the liver. Mr. Frederick Parlett Fisher Ransom, M.D., C.M. Edin., late assistant to Professor von Behring and to Professor Hans Meyer in Halle and Marburg, will investigate the mode of action of caffeine, theobromine, and allied substances on the muscular and nervous systems at the Pharmacological Laboratory, Cambridge, and at King's College, London. Mr. Sidney Russ, D.Sc. Lond., Clothworkers' scholar of University College, London, and demonstrator of physics at the University of Manchester, will investigate the association of radio-activity with cancer from the physicist's side in connexion with Dr. W. S. Lazarus-Barlow's elaborate work on that subject, which he described last year in his Croonian lectures. Miss Ida Smedley, D.Sc. Lond., Bathurst student,

Newnham College, Cambridge, and research student in chemistry of the Royal Institution, at present assistant lecturer in chemistry at Victoria University, Manchester, will conduct a research at the Lister Institute on the formation of fat in the organism. To this lady and to these gentlemen we offer our congratulations on the honour of being the first to participate in the most notable benefaction that has been bestowed upon medical research in this country. We shall await with interest the fruits of their several investigations.

LONDON COUNTY COUNCIL MEDICAL AFFAIRS.

Medical Treatment in Hampstead: An Experiment in School Clinics.

THE period for which the London County Council accepted the offer of the Hampstead Council of Social Welfare to provide medical treatment for school children in Hampstead having expired, the day schools subcommittee reported to the Education Committee on Feb. 23rd as to the permanent provision to be made for the children. The subcommittee passed no verdict on the experiment which had come to a conclusion, but stated that the medical practitioners of Hampstead had formed themselves into an association under the title of the Hampstead Public Medical Service, and were prepared to provide treatment for 400 children (the number likely to need it) suffering from affections of the eye, ear, nose, and throat, and from ringworm, at a cost of £155 per annum. The conditions agreed upon were that the medical men should provide and fit up a special department to be approved by the Council. Treatment would be arranged as follows: 10 eye cases once a fortnight, 6 ear, nose, and throat cases once a fortnight, 2 ringworm cases fortnightly—one clinical assistant being appointed in each department. Payment would be at the rate of £50 per annum per assistant, for each half day's service a week, together with a payment of 2*s.* per patient in respect of eye, ear, nose, and throat cases, and of 7*s.* in respect of ringworm cases. The subcommittee advised that this offer be accepted, and this was agreed to after some discussion.

Mr. SANDERS objected to two of the clauses in the suggested agreement: (*a*) "The hours of attendance must be made to suit the convenience of the Hampstead Public Medical Service"; and (*b*) "No grant shall entitle the London County Council to representation on the committee or to interference in any way with the work of the departments concerned." Mr. Sanders urged that the Council must not treat a body of professional men organised for business purposes in the same way that it would treat a public institution like a hospital. It was possible to make out a case for not demanding control of work done by the hospitals, but the fact that the Hampstead medical men described themselves as a "Public Medical Service" did not make them one. If a body of teachers organised themselves in a similar way for the purpose of carrying on teaching the Council would not make grants, at any rate, without strict supervision.

Dr. BEATON said that on general lines this proposal marked a distinct advance in the right direction, for it was virtually setting up a school clinic. If it was to be of value to the Council, however, there must be a measure of control.

After some discussion it was agreed to substitute for Clause (*a*) the words, "The hours of attendance must be arranged to suit the convenience of both parties," and the committee then considered the question of supervision.

Dr. BEATON thought that if the Council did not make any conditions as to inspection the medical officer would be free to visit the premises at any time.

The Rev. J. SCOTT LIDGETT, however, argued that unless the Council claimed the right of inspection, that right was not inherent in a private arrangement of this kind.

Mr. JAY (chairman of the subcommittee) said that each of the medical men taking part in the scheme had been approved by the Council's medical officer for education.

Mr. DAVIS thought inspection of the work of treatment was quite unnecessary.

The Rev. STEWART HEADLAM said there was no disgrace in being inspected and medical men must not mind it if they received grants of public money.

Mr. JAY deprecated the insertion of a clause in the agreement providing for inspection. These were men the Council could trust, and he had no doubt every facility would be given the Council's medical officer to see the work as it was being done. To put in a definite clause might cause irritation.

The Rev. J. SCOTT LIDGETT: It is not suggested in an unfriendly spirit, but only as a guarantee to the public. The spread of medical treatment on these lines without any supervision would be dangerous. Dr. Kerr ought to be allowed to keep in touch with the medical men carrying out the work.

Members on both sides of the chamber having spoken in support of this view, it was agreed to substitute for the words "the Council shall have no right of interference" the words "nothing in this agreement shall prevent the Council's representative from visiting premises when treatment is being given." On March 1st the scheme came before the Council and was approved as amended by the Education Committee.

Recovery of Cost of Medical Treatment.

As stated in THE LANCET of Feb. 19th, p. 525, a report presented to the Education Committee of the London County Council on the subject of the recovery from parents of the cost of medical treatment was withdrawn for further consideration. On Feb. 23rd the subject was again considered, the subcommittee presenting a scale based, not on the full cost to the Council, but showing the remissions which, as a general rule, would be allowed to parents unable to pay the full amount. The tentative consent of the Finance Committee had been obtained to this method of dealing with the matter. The remissions began at 1*s.* and 1*s.* 4*d.* to a parent having what the committee called a "standard family" and earning £1 a week, and decreased as the salaries increased, the size of the family also being taken into consideration.

Mr. BRAY criticised the charges as "extortionate," and an amendment was moved to reduce the charge for ringworm to a nominal sum of 1*d.* per attendance.

Mr. SANDERS said it was a rule in the public medical service that contagious diseases should be treated at the public cost.

Miss ADLER urged that it would be more economical from the Council's point of view to provide free treatment of ringworm in order that the children might be cured in the shortest possible time and so prevent the loss of Government grants.

Mr. JAY, chairman of the subcommittee, replied that the parents were exceedingly gratified at the speedy cures effected by the X ray treatment, and he was sure they would pay the proposed charges willingly.

The amendment was lost by 15 votes to seven, and the scale was then approved.

ADAMS *v.* POMEROY.

THE fund raised to reimburse Dr. Martha Adams in respect of her legal expenses, incurred as the result of the action Adams *v.* Pomeroy, is now closed. Dr. Adams's out-of-pocket expenses amounted to a sum of about £100, which was not covered by the taxed costs. It was felt that this charge should not be allowed to fall on the plaintiff, and with the coöperation of the *British Medical Journal* and THE LANCET an appeal was made to the profession. There was a generous response from individual members of the profession, and this has been supplemented by a grant from THE LANCET which now completes the required sum. On behalf of those responsible for the inauguration of this appeal the honorary secretary wishes to express recognition of the sympathy and help which have been shown in the matter.

Dr. L. Garrett Anderson gratefully acknowledges the following contributions which she has received since the publication of the last list of donations:—

	£	*s.*	*d.*
THE LANCET Relief Fund	20	0	0
Miss F. Davenport Hill ...	1	1	0
T. M. C.	1	0	0
Sir Richard Douglas Powell	3	3	0
Dr. Owen Berkeley-Hill...	2	2	0
Already acknowledged ...	78	19	6
Total	£106	4	6

Looking Back.

FROM

THE LANCET, *SATURDAY*, March 3rd, 1832.

Of the Cholera Asphyxia, called the Indian Cholera.[1]

HAVING stated, in *The Times* of the 21st June last, that I had repeatedly detected acid to be predominant in cholera morbus of these climates, I proceeded to infer that a peculiar morbific acid is the cause of all the frightful tortures and deaths that so frequently and speedily overtake the wretch who is attacked by this terrible disease; and I also concluded, that as I had found ʒj doses of the carbonate of soda, given as often as the sensations of the presence of acid were experienced, that is, two or three times an hour, or once in two or three hours, relieve the pains, remove the nausea, or it may be the sickness, accompanied by a copious eructation of an agreeable gas, and promote fecal evacuations that were in some instances to the sensation absolutely scalding, I ventured to recommend a trial of this medicine in the cholera asphyxia, having moreover reasoned myself into the conviction, from the information I have been able to obtain from various sources, that the same virus which produces the cholera asphyxia is only an aggravated power of that which produces typhus fever. (See Mr. Searle's remarks on the connexion between cholera and fever, and Dr. Holbrook's communications.) The various phenomena depend for their variety on the mental and bodily state of the attacked, especially on the state of the first passages of the alimentary canal, the intrinsic energy of the nervous powers, which differ immensely in different individuals, and is not so readily ascertained as many seem to imagine; so that some shall have only one or two symptoms of unusual *gastric irritation*, which disappear with a dose of rhubarb and magnesia; others, as a patient of my own the other day, shall have pains of the bowels and cramps of the limbs, with great debility; and so on in all the various grades till we come to the unfortunate, who seems as if suddenly poisoned, suddenly struck with the hand of death. Besides, the fact that the disease, if it does not speedily destroy, generally assumes the form of typhus fever, is another strong ground to regard the cause of the two diseases as identical, and the diseases themselves as partaking of this identity. I believe I may claim to be the first to have called the attention of the public to the curative powers of the carbonas sodæ in this class of diseases.*

* Dr. Whitelaw Ainslie, however, had advised the use of an *ant. acid*, the subcarbonate of magnesia, in a work published by him in 1825 on the Indian cholera; and as he was thirty years in India, and the President of a Committee appointed to inquire into the nature of the epidemic cholera that prevailed in Southern India in 1809, 1810, 1811, it must be evident he must possess much original and practical information, which indeed this work evinces; also a pamphlet (by the same author) very lately published for John Wilson, Princes Street, Soho. Dr. Ainslie has bestowed much thought and much research on the subject, and the work will, I think, repay the reader.

[1] Excerpt from article by Dr. Paul Slade Knight of London, "On the Use of Alkaline Salts in the Cure of Typhus Fever, Cholera Asphyxia, and other important Diseases."

HOSPITAL SUNDAY AT FALMOUTH.—During 1909 the Falmouth Hospital Saturday and Sunday collection amounted to £136. After paying necessary expenses the balance will be given to the Falmouth Hospital and the Truro Infirmary.

PRINCESS ALICE MEMORIAL HOSPITAL, EASTBOURNE.—At the annual meeting of the governors of Princess Alice Memorial Hospital, Eastbourne, on Feb. 25th, the decision of the committee to increase the accommodation was ratified. Plans were adopted for the erection of a building adjoining the hospital to hold 16 beds at a cost not exceeding £3500. This additional accommodation, it is believed, will meet the requirements for 10 or 15 years. The scheme of the committee was not unanimously approved, those opposing contending that to add to the present building was throwing money away, preferring that a house should be acquired where cases could be treated until such time as it was necessary to build an entirely new hospital.

Public Health.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

City of Aberdeen.—The population of this city at the middle of 1908 was estimated by the Registrar-General at 178,210, but Dr. Matthew Hay, the medical officer of health, thinks that the population at that time did not exceed 167,100. But the rates in his report are all calculated on the former estimate, a fact which means that the rates given are probably lower than the actual rates. With this reservation the birth-rate was 25·1, the marriage-rate 7·3, and the death-rate 14·5 per 1000 in each instance. With respect to the relation of the birth-rate to the marriage-rate it is shown in the report that the rapidly falling birth-rate is not due to a similar decline in the marriage-rate, since the average number of births to each marriage shows a steady fall since the ten years 1876–85. The infantile mortality for the year 1908 showed, as in so many other towns, a rise on that of 1907—i.e., it was 129 per 1000 births as against 125 in 1907. But this was certainly not due to any lack of effort on the part of the sanitary authority, since the health visitors specially appointed to deal with this work and also the voluntary health visitors were untiring in their efforts. But, as Dr. Hay observes, "the habits of mothers cannot be changed in a year," and we are very glad to see that as regards future mothers the Aberdeen School Board has instituted a class for young women with a lady doctor as lecturer. During the last three years diphtheria has tended to increase in Aberdeen, and in connexion with the admitted difficulty of controlling the spread of this disease Dr. Hay refers to a recent investigation in Philadelphia, in the schools of which fully 10 per cent. of all the children were found to be carriers of what was apparently the diphtheria bacillus, and this organism in a seventh of the cases in which it was found was virulent and capable of killing guinea-pigs. An analysis of the cases in Aberdeen in 1908 showed that more than half were among children at "school" age period—i.e., from 5 to 15 years of age, and that fully one-third were among children under 5 years of age. Since the former period is more than twice the length of the latter, it would seem that the prevalence was as great under 5 years as between 5 and 15, a fact which Dr. Hay regards as being against the view of a dominant school influence in production of the disease. With respect to the antitoxin treatment of diphtheria attention is drawn to a circumstance in which the city of Aberdeen by no means stands alone. Although the medical practitioners are supplied with antitoxin gratuitously and sterilised syringes are also furnished, it is but comparatively seldom that these facilities are taken advantage of, and in only one out of every eight cases was antitoxin asked for. With respect to the numerous cases removed to hospital it was found that in only a very few had antitoxin been administered previously, even although the majority of cases were not notified until the third or fourth day of the illness. Dr. Hay adds, and the medical practitioners of Aberdeen will do well to note the fact, that for several years antitoxin has been administered to many hundreds of the children in the City Hospital without a single bad result, and he advises that medical men should at once resort to its use in all suspicious cases of the disease, as he points out that the antitoxin will do no harm should the patient not be suffering from diphtheria. Dr. Hay also refers to a matter which is of considerable interest to the profession as a whole, and that is to the administration of antitoxin by the mouth instead of subcutaneously. This method has been found, he states, as the result of some recent investigations, to be too feeble to be of much value in a curative sense, although it is effective in a preventive sense. In order that absorption from the stomach may be promoted it is desirable that the subject should fast for four hours before taking the antitoxin and for two hours afterwards, and that he should drink half an hour prior to taking the antitoxin a glassful of a 1 per cent. solution of bicarbonate of soda, the taking of the serum being accompanied by five drops of saturated solution of salol and chloroform and six drops of laudanum. As a preventive dose of antitoxin 500 to 1000 units should be employed, and dried serum, which is cheaper than ordinary fluid serum and which keeps indefinitely, can

be utilised for this oral administration. There has been, Dr. Hay observes, a marked reduction in the death-rate from pulmonary tuberculosis in Aberdeen during the last 30 years, and at the present time there are only two deaths from tuberculous disease for every five that formerly took place. Reduction has taken place in other Scotch towns than Aberdeen, but in none of those towns with a population of 25,000 and over was the death-rate in 1908 so low as in Aberdeen. This fact renders it, Dr. Hay remarks, less urgent to submit a proposal for the further control of the disease, although he is at present carrying out a special investigation as to the behaviour of the disease in Aberdeen. Comparison of Aberdeen is made with Edinburgh, where definite machinery has existed for carrying on a vigorous crusade against the disease, and Dr. Hay draws attention to the interesting fact that during the years in which this machinery has been in operation the death-rate from tuberculosis in Edinburgh has fallen, if anything, more slowly than in Aberdeen. Arrangements are, it appears, being made in Aberdeen for the admission of phthisical patients into the City Hospital. An appendix to the report deals with a special inquiry on infantile mortality in Aberdeen in 1908, and among the conclusions arrived at are the following. The excess of infantile mortality is confined to the infants of the working and poorer classes, and during 1907 and 1908 the infantile mortality in houses of one, two, or three rooms was more than twice as high as among infants in houses of five rooms and upwards. The death-rate among the bottle-fed infants is usually more than twice as high as that amongst breast-fed infants, a difference which is confined almost entirely to the children of the working and poorer classes, and amongst the infants of the well-to-do classes bottle-feeding is scarcely less favourable than breast-feeding. Consequently, it cannot be the cow's milk in itself which causes the difference. The sovereign remedy for the excessive mortality amongst the working classes is breast-feeding; and Dr. Hay concludes that if the mothers in Aberdeen will act upon the advice given to them by the health visitors and other ladies nearly the whole of the waste of infant life which is not due to sheer poverty should disappear within a few years.

Borough of Guildford.—In absence of the prevalence of infectious disease systematic inspection of the houses in the poorer parts of Guildford was made during 1909, and out of 641 houses inspected defects of one kind or another were found in 561, figures which afford a good illustration of the value of house-to-house inspection and of the prevalence of minor sanitary defects. The Guildford medical officer of health, Dr. R. W. C. Pierce, attaches great importance to the maintenance of pure air inside dwellings, but he insists that before it can be taken full advantage of the people must be well and properly fed and properly clothed, and provision must be made for the permanent ventilation of living-rooms. This is a thoroughly sound proposition, but the provision of proper food and clothing is a matter which has hitherto been largely regarded as somewhat outside the immediate scope of public health. As regards housing accommodation, the borough council some years ago provided 18 cottages, and the investment, for such it is, is still regarded as satisfactory. Last year there was a total profit of nearly £12, eight of the cottages being let at 7*s.* 6*d.* and ten at 6*s* 6*d.*, and all these were occupied throughout the year. The milk-supply of this town is procured almost entirely from beyond the borough limits, some coming from distant counties in the West of England, and Dr. Pierce observes that there is no veterinary inspection of the cows either in the borough or in the adjoining rural districts. He suggests that a systematic veterinary inspection of the milch cows within and without the borough limits should be undertaken. The fact that the river Wey, which runs through Guildford, is a tributary of the Thames is in itself a sufficient guarantee that any pollution entering it will be carefully scrutinised by the inspectors of the Thames Conservancy, and they have been recently directing their attention to certain foul surface water drains which have now been connected with the sewers. It is an unfortunate circumstance that much of the surface water of this nature is very rich in organisms of the coli group. Practically all the cases of scarlet fever and diphtheria occurring in the borough are removed to the isolation hospital, at which the "return" cases over many years work out at less than 3 per cent. Of the patients admitted during 1908, 11 sent in as suffering from scarlet fever and 4 as suffering from diphtheria proved after admission not to be suffering from these diseases; but it is not stated whether or not any of these patients contracted any disease through their visit to the hospital. For the accommodation of advanced cases of pulmonary tuberculosis two open-air shelters have recently been erected in the workhouse grounds, but the earlier cases are sent by the guardians to a sanatorium. At the time of the Midwives Act coming into force the county council made arrangements with the local authorities whereby each of their medical officers of health should act as a local inspector, and Dr. Pierce reports that the arrangements worked satisfactorily. But the county council has now appointed the superintendent of the County Nursing Association to act as inspector for the whole of Surrey, an arrangement which Dr. Pierce does not regard as a beneficial one, owing to the greater delay which must ensue in dealing with cases of puerperal fever; and there is likely, he thinks, to be less response on the part of the midwives to the advice of a non-medical lay inspector than to that of the medical officer of health. The infantile mortality in the district was only 54·5 per 1000 births.

Egham Urban District.—Dr. G. Trew Cattell in discussing the water-supply of this district draws attention to the fact that the water of the Western Suburban Water Company, which supplies part of the district, has of late shown marked signs of inefficient filtration, and in his view the defect should be speedily remedied in order to avoid menace to the public health and detriment to the prosperity of the neighbourhood in its residential aspect. Reform is certainly called for, since as parts of the district are supplied with water from shallow wells it is somewhat difficult to close such wells unless there is a thoroughly satisfactory water-supply to offer. This district has hitherto been without isolation accommodation owing, it appears, to a want of unanimity amongst the representatives of the constituent authorities of the local joint hospital board. Fortunately, however, a public-spirited resident, Baron Schroeder, has given a valuable site for a hospital which is now in course of erection. The need for this institution may be inferred from the fact that during 1909 there were 60 cases of scarlet fever and 23 cases of diphtheria in the district.

REPORTS OF SCHOOL MEDICAL OFFICERS.

Borough of Guildford.—In making his second annual report as school medical officer Dr. R. W. C. Pierce is able to state that, mainly owing to the existence of the county hospital, the majority of the serious defects discovered on inspection have already been, or will shortly be, remedied. It was found that parents who had on inquiry failed to procure treatment for their children gave as an excuse the fact that they had been unable to obtain the necessary letters of recommendation for the hospital, and in this connexion Dr. Pierce suggests that it might be well to adopt the practice now in vogue in the county area of referring cases when medical treatment has not been obtained to the school managers. Inquiries were made at each school in the district as to holding classes in the open air, and the teachers have been advised to hold such classes whenever practicable. It seems, however, that only a few of the schools have suitable sheds for the purpose of these classes, such sheds as there are becoming far too hot and "stuffy" in the summer months. No school nurse has yet been appointed in this district, and consequently not so much progress as regards the remedying of verminous conditions has been made as could be wished. Dr. Pierce speaks highly of the tar paving which has been laid down in some of the playgrounds, and, in his opinion, provision of this nature as well as of suitable and sufficient mats at the school entrances does a very great deal to maintain the floors of the schools in a cleanly condition. As regards these floors, there has been a report from one of the schools to the effect that frequent washing of wood block floors has proved very detrimental to such floors, and this has led to the managers of another school rescinding a previous resolution that the floors should be washed six times yearly in place of three. Dr. Pierce thinks that in the instance referred to there must have been careless soaking of the floors with water, and in any case he pronounces that the health of the children must be considered before the lives of the floors.

County Borough of Stockport.—Mr. H. E. Corbin and Dr. A. G. Caldwell have recently issued an interim report for the period Jan. 1st to July 31st, 1909, and as a result of the

inspection of 3920 children 15 per cent. were found with dirty heads, 20 per cent. were mouth-breathers, 29 per cent. had eye diseases or defective vision, while 125 children were discharged from school attendance owing to certain disqualifying affections. 65 had ringworm or some skin disease. There were 18 with discharging ears, 5 with enlarged cervical glands, and 1 with tubercle. It is satisfactory to note that in this busy commercial town not more than 1 per cent. of the children were, in the opinion of the examiners, suffering from under-feeding, but 149 cases of rickets, due to improper feeding, were detected. About 10 per cent. of the children had insufficient or defective foot gear, and 15 per cent. showed no signs of vaccination. A considerable amount of treatment was procured by the parents, and inquiries showed that nearly all the dirty heads had been cleansed and were being kept clean, a fact which in itself almost justifies medical inspection.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8056 births and 4702 deaths were registered during the week ending Feb. 26th. The annual rate of mortality in these towns, which had been equal to 17·0, 16·6, and 15·8 per 1000 in the three preceding weeks, further declined to 14·7 in the week under notice. During the first eight weeks of the current quarter the annual death-rate in these towns averaged 15·6 per 1000, and the mean rate in London during the same period was also equal to 15·6. The lowest reported annual rates of mortality in the 76 towns last week were 6·9 in Hornsey, 7·0 in Walthamstow, 7·2 in Willesden, and 7·3 in East Ham, all being metropolitan suburban districts; the rates in the other towns ranged upwards, however, to 21·0 in Hanley, 21·5 in Huddersfield, 24·2 in Oldham, and 26·2 in Burnley. In London the recorded death-rate last week did not exceed 14·8 per 1000. The 4702 deaths registered in the 76 towns last week showed a further decline of 346 from the numbers in recent weeks, and included 266 which were referred to the principal epidemic diseases, against numbers declining from 361 to 327 in the four preceding weeks; of these 266 deaths, 101 resulted from whooping-cough, 49 from measles, 36 from diarrhœa, 34 from diphtheria, 32 from scarlet fever, and 13 from "fever" (principally enteric), but not one from small-pox. The mean annual rate of mortality in the 76 towns last week from these epidemic diseases did not exceed 0·8 per 1000, against 1·0 in each of the two previous weeks. No death from any of these epidemic diseases was registered last week in Bolton, Willesden, Tottenham, Southampton, or in 13 other smaller towns; the annual death-rates therefrom ranged upwards, however, to 2·3 in Hastings, 2·6 in Swansea, 3·0 in Hanley, and 3·9 in Burnley. The fatal cases of whooping-cough in the 76 towns, which had been 157, 162, and 135 in the three preceding weeks, declined to 101 last week; but caused annual death-rates equal to 1·3 in West Hartlepool and in Sunderland, and 1·7 in Plymouth. The 49 deaths from measles showed a decline of 22 from the number in the previous week; the highest annual rates from this disease last week were 1·5 in Hastings, 2·1 in Swansea, and 2·9 in Burnley. The deaths attributed to diarrhœa, which had been 45 and 35 in the two previous weeks, were 36 last week. The 34 deaths referred to diphtheria showed a decline of 13 from the number in the preceding week, and were fewer than in any previous week of this year; they included 12 in London and its suburban districts, 3 in Liverpool, and 2 each in Portsmouth, Birmingham, and Huddersfield. The fatal cases of scarlet fever, which had been 31 and 22 in the two preceding weeks, rose again last week to 32, of which 4 occurred in Liverpool, 4 in Manchester and Salford, 3 in Birmingham and King's Norton, and 2 in Coventry. The 13 deaths referred to "fever" showed a decline of 4 from the number in the previous week; 2 fatal cases of enteric fever were recorded in Leeds last week. The number of scarlet fever patients under treatment in the Metropolitan Asylums and in the London Fever Hospital, which had steadily declined in the 19 preceding weeks from 2819 to 1784, had further fallen to 1765 on Saturday last; 193 new cases of this disease were admitted to these hospitals during last week, against 212 and 215 in the two preceding weeks. The Metropolitan Asylums Hospitals contained but one case of small-pox on Saturday last. Of the 1386 deaths registered in London last week, 348 were referred to pneumonia and other diseases of the respiratory system, against 425 and 395 in the two preceding weeks; these 348 deaths were 64 below the corrected average number in the corresponding week of the five years 1905–09. The causes of 35, or 0·7 per cent., of the deaths registered in the 76 towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Leeds, Sheffield, Bristol, West Ham, Bradford, Nottingham, Salford, and in 50 other smaller towns; the 35 uncertified causes of death in the 76 towns last week included 8 in Liverpool, and 3 each in Birmingham, Manchester, and Gateshead.

HEALTH OF SCOTCH TOWNS.

In eight of the principal Scotch towns 867 births and 588 deaths were registered during the week ending Feb. 26th. The annual rate of mortality in these towns, which had been equal to 20·5, 17·0, and 17·7 in the three preceding weeks, declined to 16·2 in the week under notice. During the first eight weeks of the current quarter the annual death-rate in these towns averaged 17·9 per 1000, and exceeded by 2·3 the mean rate during the same period in the 76 largest English towns. The annual death-rates last week in these eight Scotch towns ranged from 12·8 and 14·7 in Paisley and Dundee, to 20·4 in Leith and 24·1 in Greenock. The 588 deaths from all causes in the eight towns last week showed a decline of 55 from the number returned in the previous week, and included 79 which were referred to the principal epidemic diseases, against 100, 92, and 69 in the three preceding weeks. These 79 deaths were equal to an annual rate of 2·2 per 1000; the mean death-rate from the same diseases in the 76 English towns last week did not exceed 0·8 per 1000. These 79 deaths in the Scotch towns last week included 40 from measles, 9 from diarrhœa, 8 from scarlet fever, 8 from diphtheria, 8 from whooping-cough, and 6 from "fever," but not one from small-pox. The fatal cases of measles, which had been 55 and 37 in the two preceding weeks, rose again to 40 last week, of which 29 occurred in Glasgow, 5 in Edinburgh, and 3 both in Leith and in Greenock. The 9 deaths attributed to diarrhœa were fewer than in any previous week of this year; they included 4 in Glasgow and 2 in Paisley. The 8 fatal cases of scarlet fever showed some increase, and included 6 in Glasgow and 2 in Edinburgh. Seven of the 8 deaths from diphtheria, and 6 of the 8 fatal cases of whooping-cough occurred in Glasgow. Of the 6 deaths referred to "fever," 4 were certified as enteric and 2 as cerebro-spinal meningitis; 4 were returned in Glasgow and 2 (both cases of enteric) in Greenock. The deaths in the eight towns referred to diseases of the respiratory system, which had been 110 and 135 in the two previous weeks, declined to 97 last week, and were 69 below the number returned in the corresponding week of last year. The causes of 14, or 2·4 per cent., of the deaths in the eight towns last week were not certified or not stated; in the 76 English towns the proportion of uncertified causes of death last week did not exceed 0·7 per cent.

HEALTH OF IRISH TOWNS.

In 22 town districts of Ireland, having an estimated population of 1,151,790 persons, 606 births and 503 deaths were registered during the week ending Feb. 26th. The mean annual rate of mortality in these towns, which had been equal to 25·0, 26·0, and 22·8 per 1000 in the three preceding weeks, was again 22·8 in the week under notice. During the first eight weeks of the current quarter the annual death-rate in these Irish towns averaged 22·4 per 1000, whereas the mean rate during the same period did not exceed 15·6 in the 76 largest English towns and 17·9 in the eight principal Scotch towns. The annual death-rate last week was equal to 28·0 in Dublin, 18·7 in Belfast, 23·3 in Cork, 10·8 in Londonderry, 21·9 in Limerick, and 17·5 in Waterford; the mean annual death-rate last week in the 16 smallest of the Irish towns was equal to 24·4 per 1000. The 503 deaths from all causes in the 22 town districts last week corresponded with the number in the

previous week, and included 28 which were referred to the principal epidemic diseases, against 32 in each of the two previous weeks; these 28 deaths were equal to an annual rate of 1·3 per 1000; in the 76 English towns the mean rate last week from the same diseases did not exceed 0·8 per 1000, while in the eight Scotch towns it was equal to 2·2. The 28 deaths from these diseases in the Irish towns last week included 17 from whooping-cough, 3 from diphtheria, 3 from diarrhœa, 3 from "fever," and 2 from scarlet fever, but not one from measles or from small-pox. The fatal cases of whooping-cough, which had been 25, 19, and 20 in the three preceding weeks, declined to 17 last week, of which 14 occurred in Belfast and 2 in Limerick. The 2 fatal cases of scarlet fever included 1 each in Dublin and Belfast; and 1 death from enteric fever was returned both in Dublin and in Cork. The deaths in the 22 town districts referred to pneumonia and other diseases of the respiratory system, which had been 185 and 130 in the two preceding weeks, rose again last week to 146. The causes of 15, or 3·0 per cent., of the deaths registered in the Irish towns last week were not certified; in the 76 English towns the proportion of uncertified causes of death last week did not exceed 0·7 per cent., and in the eight principal Scotch towns it was equal to 2·4 per cent.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet-Surgeons: G. H. Foott to the *Albemarle*, on recommissioning, and J. Moore to the *Shannon*, on recommissioning. Staff-Surgeons: P. L. Crosbie to Queensferry Sick Quarters, and J. Macdonald to the *Vivid*, additional, for disposal; N. H. Harris to the *Shannon*, on recommissioning; D. W. Hewitt to the *Emerald*; N. H. Mummery to the *Hawke*, and to the *Encounter*, on recommissioning; E. R. Grazebrook to the *Hawke*, for voyage home on the *Encounter's* recommissioning; J. D. S. Milln to the *Encounter*, on recommissioning; and M. A. Penfold to the *Duke of Edinburgh*, on recommissioning. Surgeon H. A. Browning to the *Hawke*, for voyage home on the *Encounter's* recommissioning. Surgeon J. McA. Holmes to the *Pembroke*, additional, for disposal.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel H. S. McGill, from Poona, has been appointed to command the station hospital, Secunderabad, and Lieutenant-Colonel W. C. Beevor, C.M.G., C.B., from Dalhousie, has been appointed to command the station hospital, Bangalore. Major T. McCulloch, from Lebong, has been transferred for duty to Burma. Lieutenant-Colonel W. W. Pike, D.S.O., from Darjeeling, has been transferred to the home establishment. Major J. E. Carter, Captain F. C. Lambert, and Captain S. E. Lewis, on return from South Africa, are posted to the Eastern, Southern, and Eastern Commands respectively. Major W. D. Erskine, from Egypt, has been posted to the Northern Command, and Captain P. Farrant, from Jamaica, has been posted to the Southern Command. Captain E. McDonnell and Captain W. L. Bennett have left for Bermuda. Captain R. F. Ellery has been appointed to the command of the station hospital, Benares, vacated by Major J. B. Anderson. Captain W. B. Fry and Captain J. Powell have been selected for service with the Egyptian army. Major A. J. Chambers, Captain N. J. C. Rutherford, Captain O. W. A. Elsner, Captain H. B. Fawcus, and Captain G. Carroll have embarked for a tour of duty in South Africa. Captain J. G. Churton has been appointed specialist in advanced operative surgery to the First (Peshawar), Division and Major M. Swabey has been appointed specialist in midwifery and diseases of women and children to the Fifth (Mhow) Division.

Captain John B. Cautley retires, receiving a gratuity (dated March 2nd, 1910).

The undermentioned Lieutenants to be Captains (dated Jan. 30th, 1910): Gerald H. Stevenson, John H. Spencer, William H. Forsyth, Archibald C. Amy, Alfred H. Heslop, Wright Mitchell, James A. B. Sim, Edward J. Elliot, Edward Gibbon, Robert W. D. Leslie, Ernest B. Lathbury, Cecil Scaife, Daniel M. Corbett, Michael J. Lochrin, Ernest D. Caddell, Benjamin Johnson, William E. C. Lunn, John R. Foster, William W. Boyce, Duncan Coutts, Arthur M. Benett, George P. A. Bracken, James A. Bennett, Whiteford J. E. Bell, Charles W. Bowle, Hector L. Howell, William F. M. Loughnan, Thomas W. Browne, William I. Thompson, Carlisle Kelly, Dennis T. MacCarthy, Ernest C. Phelan, John J. O'Keefe, Edward J. Kavanagh, and Arthur H. Jacob.

Lieutenant Stephen Field, from the Seconded List, is restored to the establishment (dated Jan. 29th, 1910). Lieutenant Malcolm Leckie is seconded for service with the Egyptian Army (dated Feb. 11th, 1910).

INDIAN MEDICAL SERVICE.

Lieutenant-Colonel G. F. A. Harris, Inspector-General of Civil Hospitals, and Lieutenant-Colonel C. Mactaggart, Inspector-General of Prisons, have been appointed official members of the United Provinces Legislative Council. Lieutenant-Colonel F. J. Drury has been confirmed as Principal of the Calcutta Medical College. Lieutenant-Colonel J. A. Cunningham, on completion of special duty at Rawalpindi, has been appointed Civil Surgeon, Lahore, relieving Lieutenant-Colonel D. T. Lane, who has been posted as Civil Surgeon and Superintendent of the District Jail, Sialkote. Lieutenant-Colonel G. W. P. Dennys has been appointed Administrative Medical Officer of the North-west Provinces. Major N. R. J. Rainier, Civil Surgeon, Chindwara, has been transferred to the Hoshangabad District. Captain F. N. White has been temporarily posted to the Central Provinces. Captain H. B. Drake, Deputy Assay Master, reverts to military duty. Captain F. E. Wilson has been appointed health officer, Peshawar. Captain A. E. J. Lister has been appointed surgeon to His Excellency the Commander-in-Chief in India. Captain H. S. Matson has been appointed a specialist in the prevention of disease and placed in charge of the brigade laboratory, Kohat.

SPECIAL RESERVE OF OFFICERS.

Royal Army Medical Corps.

The undermentioned to be Lieutenants (on probation):—George Henderson Stevenson (dated Jan. 20th, 1910); and Sidney John Steward (dated Jan. 28th, 1910).

TERRITORIAL FORCE.

Royal Army Medical Corps.

3rd London General Hospital: Major Sidney P. Phillips to be Lieutenant-Colonel (dated Dec. 5th, 1909). Captain Sidney H. C. Martin to be Major (dated Dec. 5th, 1909). Sir Victor Alexander Haden Horsley to be Captain, whose services will be available on mobilisation (dated Feb. 13th, 1910).

DEATHS IN THE SERVICES.

Surgeon-Major-General G. L. Hinde, C.B., A.M.D., D.S.O. He entered the service as assistant surgeon in 1855, became surgeon in 1868, surgeon-major in 1873, deputy surgeon-general in 1885, and surgeon-major-general in 1892, in which year he retired. He served in the Crimea from July, 1855, including the siege and fall of Sebastopol (medal with clasp and Turkish medal). He also served in the Boer War in 1881, and in the Soudan campaign in 1884–85 (mentioned in despatches, C.B., medal with clasp, and Khedive's star).

THE BRITISH RED CROSS SOCIETY.

At a recent meeting of the Glamorgan branch of the Red Cross Society held in the City Hall, Cardiff, under the auspices of the Countess of Plymouth as President and Earl Plymouth as treasurer, Mr. J. Lynn Thomas, the branch secretary, in the course of an interesting address, explained the part that Cardiff would take on mobilisation in forming a general hospital of 520 beds as well as convalescent homes at Bassaleg, Porthcawl, Aberystwith, Llandrindod Wells, Llanwrtyd, and other centres. Diagrams were displayed representing the scheme that the Glamorgan branch would follow in the event of an engagement being fought locally, and the speaker hoped that the branch would be in a financial position to put forward an efficient ambulance corps of its own.

In connexion with the proposed City of London Branch of the Red Cross Society, of which the Lady Mayoress has been selected as president, a meeting will be held at the Mansion House on March 10th at 4 P.M., when Sir Frederick Treves, Bart., G.C.V.O., will deliver an address.

At Marylebone a meeting of the local branch of the Red Cross Society was held at its hall in Regent-street on Feb. 23rd. This is the first borough branch in London

to furnish complete detachments for voluntary aid under the new Red Cross scheme of the Territorial Army, the first units being furnished by the Polytechnic complete in every detail, including a detachment formed by ladies, under the direction of Dr. May Thorne. Interesting addresses were delivered by Colonel Cantlie, Mr. Stanley Quicke, and by the Commandant, Dr. May Thorne.

At the quarterly meeting of the County Association of the Yorkshire (West Riding) Territorial Association, held at York on Feb. 7th under the presidency of the Earl of Harewood, the organisation committee reported on the arrangements made for the coöperation of the Red Cross Society and the general mobilisation committee with reference to the provision of general hospitals in the event of mobilisation for war. The secretary stated that everything was complete as regards the provision of hospitals at Sheffield in which place the University buildings could be used within 48 hours from receiving warning. At Leeds, however, arrangements were not so forward, but they were progressing satisfactorily.

Under the chairmanship of Lieutenant-Colonel K. P. Simpson, J.P., a meeting was held on Feb. 22nd at Petworth for the purpose of initiating a branch of the Red Cross Society for the district. Colonel Luttman Johnson, D.S.O., explained the aims and objects of the society.

THE SANITARY CONDITION OF OSBORNE COLLEGE.

In the House of Commons on Feb. 28th Lord C. Beresford questioned the First Lord of the Admiralty with regard to the sickness among naval cadets at Osborne and also as to the sanitary condition of the building. Supplementary questions were also asked by other Members of Parliament. Mr. McKenna in his replies said that the nature of the illness was epidemic influenza. 244 cadets were affected, and there had been one fatal case of pneumonia and peritonitis.

THE ISSUE OF POINTED BULLETS.

Mr. Haldane, replying to Mr. Wedgwood in the House of Commons on Feb. 28th, said that the experiments with regard to pointed bullets had so far been successful, and that an extended trial by the troops would shortly be made.

NAVAL MEDICAL DINNER.

The Naval Medical Dinner will take place in June, and a notice giving details will be issued later.

Correspondence.

"Audi alteram partem."

THE FLOODS IN PARIS: A REASSURANCE.

To the Editor of THE LANCET.

SIR,—Much has already been written upon this subject, chiefly in the way of lurid description or of Cassandra-like prophecies of trouble to come. As typhoid fever is the special dread of many, may I point out the comparatively small mortality in Paris from that disease in recent years—a fact that is surely encouraging in view of the rumours of burst drains and contaminated water-supply. (According to official information, by the way, only one sewer, that in the rue Richepanse, has burst in the whole of Paris.) The deaths from typhoid fever in Paris amounted in 1905 to 240, in 1906 to 290, in 1907 to 267, in 1908 to 224, and in 1909 to 259.

While the present flood has beaten all records both in the height to which the Seine has risen and in the material destruction it has caused, it is well known that the danger level has several times been reached in the past 30 years. It has seemed to me that careful study of the health records of Paris on these occasions would throw light on the consequences to be expected from the present state of affairs. As such information is not easily obtained, I beg to call the attention of your readers to the conclusions of a valuable article in a recent number of the *Presse Médicale* (Feb. 12th, 1910), by Dr. Jacques Bertillon, Chef des Travaux de la Statistique Municipale de la Ville de Paris, entitled "Les Crues de la Seine n'ont Aucune Influence sur la Fréquence de la Fièvre Typhoide."

Dr. Bertillon points out that while the highest point touched by the Seine in its recent rise is 8 metres 62 at the Bridge of Austerlitz, the hydrometric authorities of Paris consider a height of 6 m. 14 as "disastrous." In the last 50 years, a period of exact statistical compilation of mortality returns, that level has been reached or passed three times. Dr. Bertillon gives the deaths from typhoid fever before, during, and after the rise of the Seine upon each occasion in those parts of Paris that line the river bank, as well as in the rest of the city. The floods of December, 1882, and January, 1883 (6 m. 24 at the Bridge of Austerlitz) are particularly instructive. The statistics of 1882–83 are also much more detailed than in earlier years, and the mortality rates are obtainable week by week in the various quarters of Paris. Not only was typhoid fever ten times more frequent then than now (the average total mortality per annum of the five years 1880–84 being 2311 as compared with 256, that of 1905–09), but the summer and autumn months of 1882 witnessed an exceptionally heavy epidemic, the total annual mortality from typhoid being 3214. Now, if the floods of the Seine had any effect on the spread of typhoid fever in Paris it would surely have been in evidence upon this occasion, for they came at a time when the epidemic was subsiding, and they lasted no fewer than 13 weeks. The epidemic was at its height in September-October, 1882, the greatest weekly mortality being Oct. 6th–12th, namely, 247, and it gradually subsided through November and December with a respective weekly maximum mortality in these months of 114 and 79, through January and February (64 and 40) to March and April, when the weekly returns varied from 21 to 34. Not only, therefore, it is clear, did the floods fail to increase the epidemic, but they apparently had no influence whatever upon its gradual disappearance, which occurred as regularly in the low-lying parts of the city close to the river as elsewhere. No epidemic occurred during the whole of the year 1883, the total mortality from typhoid being, indeed, lower than during any of the preceding three years.

In view, Sir, of these facts, we are certainly justified in concluding that precedent goes to show that the present floods will not be followed by any outbreak of epidemic disease. May we not even expect, from the sanitary improvements and various precautions now undertaken, that the health of Paris will be even better than before?

I am, Sir, yours faithfully,

Paris, Feb. 24th, 1910. A. A. WARDEN.

*** We are glad to publish this interesting letter, which confirms much that has been written in our columns by our Special Sanitary Commissioner and our Special Correspondents.—ED. L.

SOUR MILK.

To the Editor of THE LANCET.

SIR,—The recent illness of Lady Bancroft, which has been attributed to the use of sour milk, has produced a number of letters in our daily press, the majority of which show, unfortunately, a lamentable ignorance of the scientific principles underlying the preparation and properties of this article. It seems to be assumed by most of those who write on this subject that the possession of a pure cultivation of a certain organism is all that is necessary, while the fact is that proper sterilisation of the milk before inoculation, the perfect cleanliness of all the vessels used, and the careful protection of the milk after inoculation and during the period of incubation, are of equal value to the purity of the culture employed, and that if undesirable effects should result from the sour milk it is as likely to be caused by the neglect of one or other of these precautions as to do with the cultivation employed or the treatment itself. In reading the letters which have appeared in the press lately one cannot but be struck by the ideas that are held by certain of the writers, that one or other of the special preparations or tablets is supposed to contain the true and only organism which can be used for this purpose. Such a statement is, to say the least, erroneous, even if it does not bear another interpretation, and it is necessary to point out that the peculiar organism which is present in Bulgarian and Eastern soured milks, and to which Professor Metchnikoff has directed attention, belongs to a class of organisms any one of which is probably as effective as another. During the past two years large quantities of genuine Bulgarian sour

milk have been brought into England, and it is open to any bacteriologist who has the necessary skill to isolate the desired organism, and at the present time there are several commercial cultures and also soured milks prepared by one or two of the well-known dairy companies which are perfectly reliable and trustworthy in every way. The public has unfortunately been led to believe that Professor Metchnikoff has stated that one organism and one only, which is to be found in a certain preparation now on the market, is the only one which is of any value, but it may be pointed out that though Professor Metchnikoff may have stated (as he has done) that this particular organism is a good one, it is also perfectly true that there are many on the market to-day equally as good. It seems to have been forgotten by many of those who prepare both commercial cultures and also soured milks themselves that in Eastern soured milks this peculiar lactic acid organism is always accompanied by a lactic-acid-producing streptococcus, and it seems therefore desirable, since it is the use of these Eastern soured milks which has given the impetus to this particular therapeutic treatment, that both these organisms should be present in preparations supplied to the public in order that they may have the benefits arising from a fermentation as similar as possible to that which takes place in the native article.

In conclusion, it may be well to direct the attention of those who wish to try this sour-milk treatment to the fact that they should assure themselves beforehand that they are fit subjects for it, as it is not everyone who is able to digest milk itself, and they should therefore consult a medical man before starting the treatment, as otherwise undesirable effects may result (which would be attributed to the sour milk itself) and tend to bring a valuable therapeutic agent into disrepute. From a bacteriological point of view it is difficult to conceive that sour milk *per se* would cause ill effects, as the acid fermentation which takes place protects the milk from other and undesirable changes which in the ordinary way might occur.

I am, Sir, yours faithfully.

R. TANNER HEWLETT.

King's College, London, W.C., March 1st, 1910.

CLAMPS IN GASTRO-ENTEROSTOMY.

To the Editor of THE LANCET.

SIR,—The discussion on the use of Clamps in Gastro-jejunostomy by your correspondents in THE LANCET has been useful in eliciting various opinions as to the supposed advantages and disadvantages of these instruments. Having tried both methods somewhat extensively, I have come to the conclusion that the use of sufficiently long and supple clamps, properly applied, does materially assist the surgeon in bringing about an accurate and rapid suturing of the coats of the applied viscera.

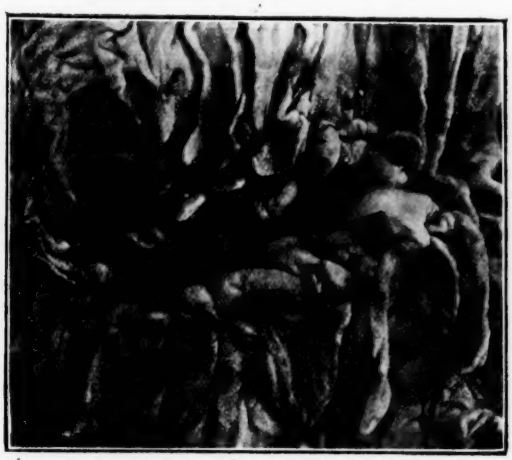
Though, as has been pointed out, the gastric and jejunal contents may be in most cases sterile, yet they are irritating fluids to raw surfaces, and the repeated necessity of sponging away this secretion and the accompanying blood prolongs the operation, especially when skilled assistance is not available. The disadvantages which have been brought forward are mainly two in number.

First, it has been suggested that the coats of the stomach and intestines may be injured by the pressure of the instrument. This, I think, will not occur if the blades are sufficiently long to allow of the necessary compression taking place at some distance from the dangerous joint angle; and if they are lightly applied, with just sufficient force to pad together, and not to cut through, the delicate mucous coat, as a ligature tightly applied cuts through the inner coat of an artery.

Secondly, as regards hæmorrhage. If the clamps are applied so firmly as to prevent all bleeding during the suturing, and are only removed after the operation is completed, then there is no doubt a real danger that serious hæmorrhage may occur undetected after their removal. Fortunately, there is a simple way of preventing such a disaster. If after the viscera are both opened and the inner or mucous thread has been placed on the posterior lip of the stoma, the clamps are, as a routine procedure, temporarily relaxed sufficiently to allow any divided vessels of any size to bleed, then any such bleeding artery or vein can be readily ligatured in the submucosa on the anterior lip, or under run with a separate suture on the posterior lip.

May I add one word concerning what seems to me to be the right disposition and relation of the mucous and sero-muscular coats of the applied viscera at the anastomotic opening. There can, I think, be no doubt that a too free removal of supposed redundant mucous membrane, together with a too deep application of the inner or so-called hæmostatic suture, may result in a condition of the parts in which the inverted and applied sero-muscular coats are uncovered or inefficiently covered by mucous membrane. Primary union under these conditions is not possible and a cicatrix enveloping the ring-like opening results. It was in order to avoid this difficulty that for a long time I avoided the use of clamps, refrained from cutting away any mucous membrane, and only included the mucous coat in the inner suture, seeking thus to provide a supple and sliding mucous covering at the edge of the anastomotic opening. It soon, however, became apparent that,

FIG. 1.



Gastro-jejunostomy opening from jejunal side.

FIG. 2.

Section through stoma. A, Mucous coat of stomach. B, Sero-muscular coat. C, Jejunum. ×, Inverted sero-muscular coats.

FIG. 3.

Section through stoma after gastro-enterostomy. St., Stomach. Jej., Jejunum. M., Mucous coat. S., Sero-muscular coat.

provided a sufficient area of both stomach and intestine are brought through the clamps, no difficulty is experienced in thus suturing the mucous coats well over the sero-muscular ring, even when clamps are used, and if rather more of the mucous membrane of the stomach is included in each stitch then the latter tends to roll over the junction towards the intestinal side, and thus shields and protects the edge of the stoma. This is seen in the accompanying illustrations of a gastro-jejunostomy opening, seen in section, and from the jejunal side, from a patient in whom death occurred from other causes three days after operation.

I am, Sir, yours faithfully,

Leicester, Feb. 19th, 1910. C. J. BOND.

To the Editor of THE LANCET.

SIR,—*Clamps or no clamps* is the question raised by Mr. Sinclair White, and, as usual in medicine, it cannot be decided by the profession, as individual bias belongs to both aspects of the question. For some years I performed anastomosis without clamps, and for other years I used them; after my visit to the Mayo brothers at Rochester, Minn., U.S.A., three and a half years ago, I adopted Roosvelt's three-bladed clamps with rubber on, and now I have discarded it in favour of a three-bladed instrument, which is weaker and used without any rubber.

I cannot recall a case where I have regretted the use of clamps, nor a case where I have regretted the non-use of clamps. The clamp I use does not occlude the blood-vessels. The bleeding is usually a little more profuse from venous congestion than when an anastomosis is performed without them. In the early days, when I performed gastro-enterostomy *en Y* I used to crush the intestine according to the method of Doyen of Paris and Roux of Lausanne; such coarse treatment of intestine did not give rise to unusual depression of pulse as some of your correspondents mention as having occurred during the application of clamps. I think that traction upon intestine and unnecessary rough handling of the solar plexus, rather than compression of intestine, is the cause of such reaction upon the circulatory system. A continuous suture with adequate tension kept up during its application and involving only short sections of intestinal wall should, I think in all ordinary cases, stop post-operative hæmorrhages, and in my opinion clamps are useful in the rapid performance of gastro-enterostomy where assistants are not well trained.

Personally, I have given up the bloodless method of gastro-enterostomy which has been so brilliantly successful in the hands of the Mayo brothers.

I am, Sir, yours faithfully,

Cardiff, Feb. 22nd, 1910. J. LYNN THOMAS.

INVALIDITY INSURANCE AND THE GENERAL PRACTITIONER.

To the Editor of THE LANCET.

SIR,—Among the numerous evils that at the present day threaten the struggling general practitioner, invalidity insurance must not be lost sight of, for it might be as oppressive and damaging as any. That what might be a very serious additional burden on our already overweighted profession is not unlikely must be admitted when certain pronouncements of the Government are considered. To some, such a forecast may appear too pessimistic, and I am not prepared to gainsay that some form of compulsory insurance might have its advantages in compelling certain sections of the community to contribute towards their own necessities, and that under certain conditions the medical profession might be a gainer thereby. But as it is most probable that the late Government had the German system chiefly in mind when indicating their proposed reform, the outlook for the medical profession of this country does not appear very encouraging.

The present generation of practitioners has grown up under a system which, if it has its defects, is in many respects more worthy of our profession than most of the schemes that threaten to displace it. It has hitherto been an independent profession, but must soon lose that position if schemes of nationalisation should succeed in gaining any considerable ascendancy. For many generations it has had the support of nearly the whole of the community. Already hospital abuse has made considerable inroads, and now the recent report of the Poor-law Commission threatens to deprive it of that large class of the public technically known as "poor." In addition to all this, we are now faced with invalidity insurance in the near future, and it might be instructive to take a glance at what this may not unlikely bring with it. Invalidity insurance, as met with in the German Empire, means a compulsory insurance of all wage-earners with an income below a certain standard. Employers are required to deduct a portion from the wages of their employees; they are themselves obliged to contribute another portion, and certain contributions are made by the State. Out of funds collected in this manner the insured are found medical attendance and subsistence during illness and necessary hospital and sanatorium treatment in particular cases.

What effect this invalidity insurance has had on the profession in Germany I do not know. It is possible the medical profession there has benefited by it. But in the latter case it would be no safe deduction to assume that a similar result would follow in this country. It all depends on what was the condition of the German medical profession in the time antecedent to this national insurance. What would be the probable effect of such an insurance on general practice in the case of the great majority of practitioners in this country? I believe there are few who do not in a great measure rely on the private fees paid by a considerable majority of those members of the community that would certainly be included in this form of insurance. Whether these would be content under such circumstances to suffer regular deductions from their earnings for medical insurance, and employ their private doctors just the same, I do not know. I leave it to the opinion of my brethren. Personally, I think it most unlikely. It is quite possible that by consenting to the imposed conditions many of the private doctors of the insured would be able to continue to attend their former patients; but it would be strictly on a club system, and it would be absurd to imagine they would be likely to get anything like the same remuneration for their work as had previously been the case. One result is obvious. There *must* be an enormous increase in contract practice. Again, a large number of practitioners—I might almost say a majority—cannot do without clubs at the present time, although they justly complain of their club remuneration. Invalidity insurance, if it did not increase the rate of the present club payment, would necessarily make a profound difference in the present club system. Directly it became fairly established, practitioners would speedily lose their present clubs, as such, although they might have an opportunity of retaining a portion of their members by assisting in the working of the scheme. Their total number of club members would probably be greater than at present by having enrolled among them many of their former private patients. Such an outlook does not seem to me very attractive to the average practitioner. Nay, if the choice were between this and the nationalisation of medicine, it might be somewhat difficult to choose. Of two evils, we are told to choose the less, but which would be the less?

Of one thing I cannot help feeling convinced: that for the existing practitioners, and those seeking to follow after them, the present condition of things with all its evils, is better, and offers far greater advantages for every one of us, than any improvement likely to arise from invalidity insurance, or the nationalisation of medicine. On the other hand, it might possibly be urged, How about the public? The foregoing might be true with regard to the profession, but it might be otherwise with the public. The public might be a gainer though the doctor were a loser. I cannot think so. For the welfare of the public, in my opinion, the following conditions are all important: 1. The medical profession must be independent. Under no system of nationalisation can this be the case. 2. It must afford a decent subsistence to its members, and at least raise them above actual poverty. This condition at the present time is not altogether satisfactorily complied with, but it would be no remedy to change a large number of the present private patients of doctors into club patients. 3. Free competition among all practitioners, restrained only by proper ethical rules, is vitally necessary for the welfare of the public; and although it may be said in some cases to protect imposture and ignorance, on the whole it is the best incentive to

good work; and by encouraging to the utmost individual enterprise it largely tends to promote and foster the well-being of the community.

I am, Sir, yours faithfully,

MAJOR GREENWOOD,
Hon. Sec. Poor-law Medical Officers' Association of England and Wales.

Copthall-avenue, E.C., Feb. 26th, 1910.

UNIVERSAL SERVICE PETITION.

To the Editor of THE LANCET.

SIR,—Members of our profession being closely in touch with the aspirations of the individual, as contrasted with the wishes expressed by the crowd, will have realised that a wave of national self-consciousness is passing over the country. To-day men are realising more fully than they have done for a generation their duty towards the nation and the Empire. They have become somewhat tired and ashamed of estimating security by the quota of *Dreadnoughts*, and they desire to take upon their own shoulders a proper share of the Imperial burden. This sentiment has during the past eight weeks taken corporate form. A body of citizens, several members of which belong to our profession, have organised a petition for presentation to His Majesty the King, the wording of which purports to bring official discussion of efficient national defence at once upon the *tapis* of practical politics.

The purpose of this petition may be summarised in the following sentences: Recent events make it evident that defence of these islands must be organised now. It is not advisable tacitly to await the time when Parliament shall consider itself free to devote itself solely to the discussion of defence. Time will be saved if a decided answer is given by the people to the simple question, "Do you desire universal service for home defence?" This answer, if it is to be in any degree unanimous, must be dissociated from all party questions, and can therefore be obtained only if the means of giving it is arranged by citizens unassociated with party politics. No misunderstanding will arise if a petition is organised by the citizens for themselves, and if it is presented by the citizens to the head of the State. Opinions differ widely as to the amount of training and length of service which will be of value in a military sense and possible without dislocation of trade. Unanimity on these points cannot be arrived at, and they must be settled by Parliament in consultation with military and commercial experts before universal service becomes law. The matter will never be discussed by Parliament until the people have signified their readiness to serve.

The "Universal Service Petition" has been organised by private citizens, uninfluenced by party politics or by any school of military thought, in order to give the individual an opportunity of answering the plain question, "Do you desire that every man should be trained to bear arms and that he should be rendered liable to serve in defence of his country?" The words "service" and "defence" are used here as they are understood by the man in the street, and do not necessarily connote service in time of peace or outside the country. For the military experts the words "service" and "defence" may have a special meaning, but the man who signs the "Universal Service Petition" merely signifies his wish that every man should be armed for his country's defence and be taught to use his arms effectively. He will see to it that his representative in Parliament knows his exact wish before a Universal Service Bill becomes law. Without doubt, the majority of the people are ready to bear arms; the minority should reflect that our shores are no longer invulnerable and have to be guarded by an immense fleet, which is therefore unable to act on the high seas to protect the trade routes and the outlying parts of the Empire. Universal service, in which men of every class take their share, will restore national cohesion. A soldier thinks first of the welfare of the nation and the Empire; the interests of his class and of his person take a second place. Universal service improves the physique and morale of a nation, and by checking "Jingo" outbursts makes for peace. If the headquarters of the Empire are weak the whole structure may readily crumble. The colonies are adopting manhood armed service. We can scarcely do less. In the face of an actual armed menace we should all be clamouring for arms. An armed mob is worse than useless, and, opposed to trained troops, a nation hastily armed is a nation committing suicide. Let us, therefore, demand arms now and learn to use them effectively. This demand is the meaning and purpose of the "Universal Service Petition."

The circulation of the petition papers requires organisation, but the "Universal Service Petition" is in no sense a permanent body, and it is hoped that the work will be accomplished by voluntary effort in a period to be estimated in weeks. The work is supported by numerous members of the existing patriotic organisations, and it has to-day received the official blessing of the National Service League, of which Lord Roberts is the president. In each parish and village the doctor is the man who is in touch with every individual. He is therefore the man to initiate a movement springing from a popular desire, and it is hoped that a very large number of medical men will communicate with the secretary of the Universal Service Petition, 109, Victoria-street, London, S.W., who will furnish information and a scheme for the circulation of the petition papers.

I am, Sir, yours faithfully,

Victoria-street, S.W., Feb. 19th, 1910. ERNEST WAGGETT.

THE CONTROL OF SCARLET FEVER.

To the Editor of THE LANCET.

SIR,—A leading article with this title in THE LANCET of Feb. 19th last, based on the paper on the Control of Scarlet Fever, read by Dr. F. G. Crookshank before the Epidemiological Section of the Royal Society of Medicine on Jan. 28th, and published in THE LANCET of Feb. 19th, rightly lays stress on the importance of the control of infectious diseases in isolation hospitals and invites the observations and views of other medical superintendents of fever hospitals.

Between the years 1901 and 1908 the writer was the medical superintendent of a fever hospital which had to serve the needs of a resident population which increased from 29,000 to 55,000 during that period. It may well be realised that during that interval, before enlargement of the hospital to meet its growing needs could be secured, times of anxiety were experienced when it was impossible to rigorously reserve separate pavilions and wards for separate diseases. The results of administration experienced under these conditions are briefly crystallised in the following quotations from a paper on Scarlet Fever and Diphtheria from the Public Health Point of View, published in the special number of the *Practitioner* on Scarlet Fever and Diphtheria (January, 1909:—

> A very important point in the administration of a fever hospital, if it is going to prove a really preventive measure instead of a possible danger, is the strict limitation of the numbers admitted. (The Local Government Board standard of 2000 cubic feet for each patient should be upheld as a minimum.)
>
> Should the cubic space be reduced complications are sure to arise. In a common ward, each patient is, to a certain extent, a source of possible detriment to the others. ..... Other points of internal administration are also of importance in determining whether a fever hospital is of real use or the reverse; particularly in regard to the supervision and instruction of the nurses with reference to their duties.
>
> A point to be constantly urged, until the nurses almost automatically act on the idea, *is that each patient should be looked upon as possibly harbouring some form of infection which might be transferred to another*. This applies to all cases on admission until proved bacteriologically free of diphtheria organisms, and streptococci or other infective bacteria; and especially to all cases with aural or nasal discharge.
>
> This idea involves not only separate articles of linen, food, crockery, and plate, but also which is more important still, that the nurse should carefully soak her hands in a suitable disinfectant solution, after attending to *each* patient *before proceeding with the next*, even in a ward labelled for only one recognised zymotic disease, say scarlet fever.
>
> When properly administered, a fever hospital can only work for good, but under bad management, or insufficient control, it might easily be a source of evil. There is much to be said for glass partitions between beds, but I am satisfied that the main point is to have each patient dealt with, as if he or she might infect or receive infection from another, even in a common ward. (Practitioner, vol. lxxii., No. 1, January, 1909, p. 164.)

By the practice of such principles it is possible to completely eradicate that bugbear known as post-scarlatinal diphtheria, which by systematic swabbing of every scarlet fever patient on admission was found really to be accounted for by the presence of Klebs-Löffler bacilli in the throats of 2 to 4 per cent. of the scarlet fever cases *on admission*. For want of other accommodation these cases had to be admitted to the scarlet fever wards, but the precautions mentioned above invariably prevented any spread or the occurrence of so-called post-scarlatinal diphtheria among the other patients. Before the *régime* introduced at the end of 1901 similar cases were,

as a matter of course, always admitted to the scarlet fever block, since the question of the presence of diphtheria bacilli in the throats of cases of scarlet fever on admission prior to 1901 was never even thought of in connexion with the administration of most hospitals, much less systematically sought for by bacteriological examination of throat swabbings. Prior to the inauguration of this scientific control of the new admissions post-scarlatinal diphtheria frequently occurred, as it did also during the interim which elapsed before laboratory details were complete under the new *régime*.

There can be no doubt that too much money has been spent in many places on very elaborate fever hospital buildings where the money would have been better spent in securing the full-time services of an expert fever hospital medical superintendent with bacteriological knowledge, experience, and equipment, who would so have instructed his nurses as to secure enviable results in a hospital of a more modest design than many municipal hospitals in existence. I advocated the use of glass partitions in wards in a paper on "Fever Nursing" in *The Hospital* in 1901, but riper opinion is outlined in the last sentence quoted above from the later paper in 1909.

I am, Sir, yours faithfully,

Norwich, Feb. 19th, 1910. J. T. C. NASH.

TUMOURS OF BILATERAL ORIGIN.

To the Editor of THE LANCET.

SIR,—In reply to your annotation on my writing *re* bilateral tumours in THE LANCET of Feb. 19th, p. 515, I would like to offer a few comments.

In the first place, let me remark that truth unsearched for seldom comes to light, and that facts often appear incredible only because we are ill informed. Even in the learned professions most people nowadays think very little and very seldom; yet all have strong beliefs, opinions, &c., which are determined for them mainly by the bias of the moment, which is often hardly distinguishable from the folly of the moment. The sense of organic continuity which would often suffice to correct these divagations is only too often lacking. Medicine, which is neither an exact science nor a perfect art, has for this reason always been specially prone to this kind of infirmity. Hence Celsus long ago remarked: "It is a good thing to be free from the bias of an education exclusively professional."

The present unsatisfactory condition of medical knowledge is mainly due to impediments of this kind, for faulty bias prevents pathologists and practitioners from assimilating the enormous array of new facts, data, and general conclusions which are now available for progress but unutilised. Owing to the frequency of such lapses the history of medicine teems with might-have-beens. If the best results are to be attained the profession must coöperate and sympathise with its pioneers; for the greatest discoveries fail to develop and fructify when the spirit of the age is apathetic, ignorant, bigoted, "opaque of nature and of soul," money-grubbing, or otherwise out of joint. Moreover, it cannot be too strongly insisted that the science which investigates the facts and laws of disease is something quite different from the arts applied to cure the same, and from the fads and fancies of the latter it must be completely emancipated.

It is to the crosslights derived from the neighbouring sciences, especially from the biological sciences, that we must look for the advancement of medical science rather than to clinical experience. Above all, it is to the biological sciences that we must look for true methods of research rather than to clinical experience, which of itself inevitably tends to empiricism, stagnation, and retrogression. For instance, biologists having shown that life is the continual adjustment of internal arrangements to external arrangements, it follows that disease, which is but an unusual manifestation of life, must be similarly conditioned. Strange to relate, this cardinal law of pathology, which is of universal application, finds hardly any recognition in the writings of modern pathologists. Hence the whole of pathogenesis needs to be rewritten from this standpoint; for the conditions of existence constitute the chief factor in the causation of disease, whatever may be the nature of the spark which precipitates the explosion. The first attempt to apply this method to the investigation of disease is embodied in my recently published book on the Natural History of Cancer, which has thus introduced a new note into pathology.

Now, in the matter of tumour pathogenesis, professional bias has taken the form of a blind, unreasonable, and invincible prejudice in favour of the microbic origin of tumours, which will not tolerate a single suggestion in the contrary sense. The violence and fury of this fanaticism has lately been brought home to me by the stream of abuse which its votaries have poured on my book, because I have declined to believe in their fetich; and this although in my book I have given far more attention to their theories, facts, and experiments than they intrinsically merit, out of deference to their being in what may be called the order of the day.

I fancy some dim echo of this miserable bias must quite unconsciously have affected your correspondent, who has so politely criticised my recent writing and belauded it with manifold dubitations. With regard to the bilateral origin of malignant tumours he says: "There is always a possible objection that the growth on one side appearing first has given rise to the growth which appeared later on the opposite side." Just so; but, as far as I could determine, all cases of this kind have been rigorously excluded from my list. For instance, in Cohnheim's case of bilateral rhabdomyosarcoma of each kidney, the appearances were such that it seems to me unreasonable to doubt the independent origin of each tumour; and this is typical of the cases comprised in my list. But, even supposing that error has occasionally crept in, the number, variety, and authenticity of the instances of the bilateral outbreak of malignant disease there cited is too considerable to be thus explained away, even in the absence of collateral evidence pointing in the same direction, of which, however, there is an abundant store on hand, although, for considerations of brevity, I have not drawn upon it.

Then, concerning the bilaterality of fibromas of nerves, your correspondent says: "We fail to see much force in this example." But surely this multiplicity—when dissemination can be excluded, as it can in these cases—is a remarkable and very striking peculiarity, considering the solitariness of most tumours; and it is just such occurrences that prove tumour formation to be "something more than a solitary local aberration." Moreover, in this affection it has been repeatedly shown that the multiple tumour formation takes place in certain spots where the development of the neurilemma is imperfect, owing to antenatal developmental disturbance; and it is just in these localities that malignant disease is apt to supervene. I submit that such indications, which are by no means rare, are not without a certain significance for the pathogenesis of tumours; and, in nearly all cancers, the impress of the prenatal stamp can be found when it is thoroughly looked for.

I am, Sir, yours faithfully,

Feb. 19th, 1910. W. ROGER WILLIAMS.

THE STANDARDISATION OF AXIAL NOTATIONS.

To the Editor of THE LANCET.

SIR,—Dr. W. Ettles in his friendly criticism of my method of the axial notation of cylindrical lenses in THE LANCET of Feb. 26th, p. 602, has overlooked the main point. The question involved is not that of deciding upon or endorsing a "best" method, but of establishing a standard which is known to ophthalmic surgeons and opticians throughout the world. The fact that the Optical Society has adopted the protractor as the basis of its method does not explain why the horizontal has always been made the basal line from which the axes of cylindrical lenses have been delineated. But as between the compass and the protractor, which is the better, more universally known instrument? The answer must be—the compass. The compass, therefore, is undeniably the best instrument upon which to base a standard. The so-called "standard" of the axial notation of cylindrical lenses in this country is not a "standard" recognised by foreign ophthalmic surgeons and opticians. Let us suppose, for example, that a prescription for cylindrical lenses has to be cabled to America. It would be of little purpose sending a message such as the following: R.E. + 3 cyl. axis 30°, L.E.

+ 3 cyl. axis 115°, even if the additional information were conveyed, "British optical standard." But no confusion could arise were the message to be: R.E. + 2 cyl. axis 45° N.E., L.E. + 2 cyl. axis 45° N.W. (mariner's compass), and the same would be true wherever the cable were sent.

I have by this compass method merely indicated the two upper quadrants as N.E. and N.W. But if it were thought that opticians would regard this as insufficiently precise, the remedy is easy by following more closely the direction points upon the mariner's compass. Indeed, going a step further, the ophthalmic surgeon might learn to "box the compass" and prescribe accordingly. He would then have the satisfaction of knowing that his prescription could not be misunderstood by any optician throughout the world. I doubt whether there is any other method at present in use for which the same result could be claimed. It would be interesting to hear some views upon this subject from members of the Optical Society.

I am, Sir, yours faithfully,

Wimpole-street, W., Feb. 28th, 1910. PERCY DUNN.

To the Editor of THE LANCET.

SIR,—The "Compass" Trial Frame described in your issue of Feb. 19th would, I fear, instead of leaving "no room for confusion" only tend to make "confusion worse concounded" eventually. There would, of course, be no difficulty whatever in reading a prescription with that copy of THE LANCET open before the reader, but as he may not have this, or a similar chart, to guide him, it is quite possible that an outside optician, even with the assistance of a compass, would be puzzled to know whether his prescribed – 2 D. Cyl. Ax. 15° N.E. referred to an axis 15° East of North or 15° North of East. Also, there is no reason whatever why a compass notation should not equally well start from the South, or from the East, or from the West. Many practitioners would doubtless prefer one starting from some other part of the compass.

Then our ophthalmic specialists might learn to "box the compass," and, to prevent misunderstandings, we might eventually have our prescriptions rendered thus :—

D	S
– 1·5 D. sph.	– 1·75 D. sph.
⊖ 2·5 D. Cyl.	⊖ – 3·75 D. Cyl.
3·75° E.S.E. of S.E. by E.	7·5° S.W. by S. of W.S.W.

Personally, I prefer numbering these axes 150° in either case, as they would be shown by the method recommended by the International Ophthalmological Congress. As Mr. Dunn acknowledges, "it is a workable method," and surely it is not now impossible to expect universal agreement on such a simple matter. The only difficulty, to my mind, is the natural dislike of anyone to give up a system he now makes use of, because it is perfectly satisfactory to himself, and the adoption of any fresh system involves some little personal trouble until one becomes more familiar with the method.

I have often thought that a "clock hour" trial frame would have been the best of all, each minute of the frame representing six degrees of our present frame, the intermediate degrees being represented by decimals or by seconds, thus :—

By the international method.				By a clock hour method.
30° could be termed as wished			either	10′ or 40′
45°	,,	,,	,,	7·5′ ,, 37·5′
60°	,,	,,	,,	5′ ,, 35′
90°	,,	,,	,,	0′ ,, 30′
120°	,,	,,	,,	55′ ,, 25′

A "clock hour" trial frame would answer equally well for either eye and would fulfil all the requirements of a "standard" as mentioned by Mr. Dunn.

I do not think, however, there is any need to bring out a "clock hour" system, a compass system, or any fresh system. I hope the international system will be given a fair trial, because those who decline to conform to a system authorised by a congress of such influence as that which met at Naples will probably decline to conform to any system but their own special favourite one.

I am, Sir, yours faithfully,

Feb. 24th, 1910. JAMES P. WALKER, M.D. Durh., D.P.H.

THE POOR-LAW MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—May I point out to Dr. Alan Randle that in most services complaints are only listened to by the authorities when made through one's superior officer. As a matter of fact, an assistant medical officer has little, if anything, to do with the guardians, except when the medical superintendent is away. At Lewisham I rarely saw a guardian, and no occasion for speaking to one ever arose. In a well-organised infirmary the work is not exacting and the opportunities for clinical study are unrivalled. The pay might well be increased, but I can assure Dr. Randle he is well off compared with the majority of those in general practice.

I am, Sir, yours faithfully,

G. F. JONES, M.B., B.S. Lond.,
Formerly Assistant Medical Officer, Lewisham Infirmary.

Blackpool, Feb. 28th, 1910.

THE BEIT MEMORIAL FELLOWSHIPS FOR MEDICAL RESEARCH.

To the Editor of THE LANCET.

SIR,—In your issue of Dec. 18th, 1909, you give the particulars concerning these Fellowships. The last clause reads as follows: "Fellows are required to devote the *whole of their time to this authorised research*" (italics are mine). The result of the election has now been announced and under the name of each successful candidate is given the *appointment* or *appointments* that he holds. Are we to understand that each candidate will retire from these appointments? If not a most regrettable error has been made by the Advisory Board.

Space will not permit, neither is it necessary, to mention the posts held by each candidate; but taking a few examples selected at random we find that one of the Beit Fellows is a physician to the out-patients at two hospitals at a considerable distance apart, and does his research work at another centre, therefore a large amount of his time is wasted in travelling, also he may have some private practice; another is medical registrar at a London hospital and physician to the out-patients at one of the children's hospitals; another is demonstrator of physiology in one of the medical schools.

There is no reason to object to these or the other appointments, *per se*, because, as is known by experience, the best original work does not come from the paid investigator who does nothing else, but from the man with other work on his hands. What everyone wants to know is why draw up an elaborate list of regulations, however absurd some of them may be, and disregard the most important of all at the first opportunity?

Many men with a sound pathological training, who are now holding posts as demonstrators of pathology, could have been applicants for the Beit Fellowships but for the clause above alluded to. It is for this reason that I have referred to what must appear to all to be a serious hindrance to any scientific advancements which are likely to ensue from this fund. I am, Sir, yours faithfully,

March 1st, 1910. X.

BRISTOL AND THE WESTERN COUNTIES.

(FROM OUR OWN CORRESPONDENTS.)

University Colston Society: Annual Dinner.

THIS dinner, postponed from Founder's Day, Jan. 14th, on account of the general election, was held on Feb. 17th. The ex-Lord Mayor, Mr. Edward Robinson, who presided, spoke of the work done by the society, which at similar occasions in previous years had been the University College Colston Society. During the last year £477 had been collected, and the society had since its foundation raised over £5000 for the University. It had, moreover, kept the University idea before the public and done useful educational work. The Bishop of Bristol following, proposed the health of the guest of the evening, Sir William Ramsay, who replied with an admirable speech. He told various anecdotes of his Bristol experiences in 1880 to 1887, when he was Professor of Chemistry and Principal of University College, and gave

some very sound advice with regard to university administration. One of his points was that elections to professorial chairs should be largely left to the faculty in which the vacancy occurs, who should appoint a selection committee to make inquiry by letter and to find out what candidates would be likely to offer themselves. The information thus gathered should be sent to the Senate in the form of a reasoned report. He also pleaded for proper payment of professors and lecturers, a plea that is not out of place in Bristol, and especially in relation to the faculty of medicine. Should a professor be chosen for teaching ability, on account of a capacity for organisation, or because of his aptness for research? Sir William Ramsay said that it was rare to find all three forms of ability in one man, and considered that the greatest weight should be attached to enthusiasm for research He expressed a general disapproval of scholarships, considering that much of the money thus spent might be saved for other purposes if students were able to apply for financial help (to be principally given in the form of loans) by submitting their circumstances to private but impartial inquiry, instead of entering for competitive examinations. Other speakers were the Right Hon. Henry Hobhouse, who alluded to the proposed establishment of aeroplane manufacture in Bristol, and suggested the foundation of a chair of aeronautics; the Lord Mayor and the Sheriff, who replied on behalf of the city; the President of the Bristol Chamber of Commerce, who proposed "The University," and expatiated on the importance of higher education in relation to modern commerce; and the Vice-Chancellor, Sir Isambard Owen, who acknowledged the munificence of the gifts by which the University had benefited hitherto, and "asked for more." The in-coming President, Mr. J. H. Howell, was then conducted to the chair.

Bristol Royal Infirmary.

The annual meeting of the governors of the Bristol Royal Infirmary was held on Feb. 22nd under the presidency of Sir George White. The financial statement showed that during 1909 the receipts were £19,291, and that an unfavourable balance of £2495 remained at the close of the year. The total deficit of the institution is now £3532. The medical report stated that during the year the numbers of in-patients were 3819 and of out-patients 50,195, against 3869 and 49,998 respectively in 1908. The cost of each occupied bed is £59. The chairman stated that the scheme for building new wards, casualty department, and operating rooms opposite the infirmary is now being proceeded with. It will be connected with the old building by subways, and it will be so constructed that in the future, as funds permit, further blocks may be added.

The Medical Inspection of Children in Devonshire.

Mr. G. Adkins, the medical officer of health of Devon, in an interesting address delivered at the annual meeting of the Devonshire Nursing Association held at Exeter on Feb. 22nd, stated that during 1909 the school medical officers of Devon inspected 20,000 children in the 540 schools of the county. Of these 12,000 required treatment. The largest percentage of these were due to pediculosis; these were about 20 per cent. (on analysis this shows that the percentage among boys was 4 per cent., and among the girls 40 per cent., being of course a question of long and short hair). 15 per cent. of the children had defective vision. Adenoids and disease of tonsils 12 per cent. Teeth, 10 per cent. were defective (about 80 or 90 per cent. had disease of the teeth, but only those cases were included as defective when the teeth were causing harm either by indigestion or blood poisoning). 5 per cent. of the children had ear trouble, and tuberculosis worked out at only 0·2 per cent. Mr. Adkins added that he felt sure that if medical inspection was supplemented by judicious treatment, Devon, which last year had 75 per cent. of boys rejected for the navy, would soon see such conditions disappear.

Exeter Sanatorium.

The annual report of the medical officers of the Exeter Sanatorium, which was presented at the last meeting of the Exeter city council, states that during 1909 361 cases were treated, including 34 remaining over from 1908; 184 of these patients came from the county of Devon and 177 from the city of Exeter. 9 patients died from diphtheria, 5 from scarlet fever, and 2 from enteric fever. The report adds that during the last three months of the year the accommodation of the institution was severely taxed in consequence of the outbreak of enteric fever, and also refers to the difficulty of isolating cases in which scarlet fever and diphtheria were running concurrently.

Royal Devon and Exeter Hospital.

The annual meeting of the subscribers to the Royal Devon and Exeter Hospital was held on Feb. 24th. The medical report stated that during 1909 1585 in-patients were admitted, against 1509 in 1908. The average daily number of in-patients was 159, an increase of 2 on the previous year; the average stay of each was 36 days, against 33 in 1908; and the average cost of each occupied bed was £55 18*s.* 11*d.* The out-patients numbered 5500, as compared with 5583 in the preceding year. The financial statement showed that the income amounted to £8595, while the expenditure was £9719, leaving an unfavourable balance of £1124. The total deficit of the institution at the close of 1909 was £2082. The committee states that the Ockenden Convalescent Home at Torquay, which has been acquired through the generosity of Miss Erle, is a great boon to the patients.

St. John Ambulance.

The annual meeting of the Bristol corps was held in the large hall of the University on Feb. 10th, the Lord Mayor being in the chair. The yearly report showed a membership of 353, an increase of 59 since last year. The number of accidents attended was 1166; removals made were 1422; 152 fires were attended, and 2905 cases not included under the above headings, making a total of 5645 cases. A nursing division has been introduced and the corps has come into the possession of a portable cottage hospital. The total receipts for the year were £1178 12*s.* 6*d.*, which, with last year's favourable balance of £151 14*s.* 5*d.*, exceeded the total expenditure by £222 5*s.* 6*d.* The Lord Mayor, the Sheriff, Dr. C. A. Hayman, and Sir George White also spoke.

Care of the Feeble-Minded.

On Feb. 23rd a meeting was held at the Bristol Council House, presided over by Alderman Cook, chairman of the Bristol Education Committee. Mrs Hume Pinsent, a member of the Royal Commission on the Care and Control of the Feeble-Minded, gave a very interesting address, and Dr. J. Michell Clarke proposed a motion calling for legislation on the lines recommended in the report of the Royal Commission.

March 1st.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Prevalence of Anthrax.

THE prevalence of anthrax was discussed at a meeting of the Cheshire Chamber of Agriculture on Feb. 21st at Crewe, and there was a consensus of opinion as to the seriousness of the position, both for farmers and the public.

The Risks of Post-mortems.

At a recent meeting of the Manchester Infirmary Board a legacy was received from the estate of the late Mr. G. W. Smith, the object to which it was to be allocated being somewhat unusual. The amount was a few shillings less than £2340, the income from which was to be devoted, at the discretion of the medical board, to the assistance of any member of the surgical or medical staff of the hospital suffering illness through injuries sustained in the course of post-mortem examinations or operations. A donation was also received from Mr. George Spregelberg to endow a bed for the treatment of cancer patients.

Milk.

The council of the Lancashire Farmers' Association met at Preston on Saturday last and passed a resolution that every tin of condensed milk made from machine-skimmed milk should have printed on it in bold type, "Unfit for infants and invalids." No one will dispute the broad accuracy of this statement, but the chairman went rather too far in saying that skimmed milk "contained *no* nourishment," and that "everything possible should be done to prevent it being sold to persons ignorant of its bad qualities." Skimmed milk has its uses.

Houses and Slums.

Wherever we look in our towns in this district, and, unhappily, the same may no doubt be said of many other districts, we see the terrible effects of overcrowding, dirt,

and destitution. An inquest was held a few days ago at Rochdale on a child, aged 2 years, when it was stated that the father had lost during the last month his wife and two other children. The coroner spoke strongly on the case, and said that in his opinion the child had died owing to the insanitary condition of the house, and Dr. W. J. Kerr said the death was indirectly due to the conditions under which the child had lived. The jury added a rider to this effect. At Oldham about the same time, some instances of remarkable overcrowding came under the notice of the sanitary and building committee. In one house 11 persons lived—two families and a lodger. In another there were nine persons, and each house had only one bedroom and no back door. In some parts of Manchester things are no better. Within a few minutes' journey from the town hall there is a small square with broken flag pavement, allowing pools of watery filth to stand, and on one side a solitary sanitary convenience for the four dwellings in the square. These four houses have four or five rooms, each room occupied by a family. In one room on the ground floor, that was once flagged, the plaster was falling from the ceiling. There were a rough table, a part of a chair, and a bedstead with clothes on it that "made the flesh creep," says my information. This "furnished room" had two or three cheap pictures, too dirty for their subjects to be distinguished, and over the doorway was nailed the greeting, "A Joyous New Year." The weekly rent was 5*s*. 3*d*. Up a narrow dark staircase there was a small landing, with a room on each side, also "furnished." One had three brick walls and on the fourth side a barred wooden partition. A man, his wife, and three children dwelt in this room, for which the rent was 5*s*. 10*d*. An old couple lived in the other, a rather smaller room, for which they paid 5*s*. 3*d*. per week. The woman was thin and pale, and the man looked as if death were not far off. Consider the sanitary and moral dangers of such places!

March 1st.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Ayr County Hospital.

THE annual report of Ayr County Hospital just issued discloses a much more satisfactory state of affairs than existed a few years previously. In the first place, more than a year ago there was a reorganisation of the consulting staff, and the new arrangement has been found to work extremely well. In addition, it will be recollected that two years ago, owing to lack of funds, the directors had no option but to close two of the wards. At that time an appeal was issued and an attempt made to secure a larger income for the hospital. It is satisfactory to know that that appeal has been so far satisfactory that the wards which were closed are now to be reopened. The directors have also decided to spend £1000 on a new heating system. The total ordinary income for the year amounted £2966, an increase of £285 over the previous year. The ordinary expenditure exceeded this sum by £469. On the other hand, the extraordinary income consisted of legacies amounting to £2411. In addition to these legacies the directors received during the year £1400 towards the endowment fund. During the year the number treated in hospital was 703 and at the dispensary 1312.

The Mixing of Babies in Hospital.

A case of mistaken identity regarding two children sent into the middle ward of Lanark Fever Hospital came up for discussion last week in the ward district committee meeting. The incident occurred when the hospital was exceptionally busy. Two children were sent into a fever ward on the same day within a few minutes of each other. One of the children, certified by the family medical attendant to be suffering from scarlet fever, was found not to be suffering from fever at all, and it was while removing this child to an isolation ward that the nurse lifted the wrong name-card. The father came up and took the wrong child home without noticing the mistake. On their arriving home, however, the mother thought that something must have happened to her own baby, and, spurning the changeling, she hastened to the hospital, where she was greatly relieved to find her child still in existence and doing well.

Marine Biological Station at Millport.

The general committee reports that the facilities for study and research at Millport have been well maintained throughout the year. The steam yacht *Mermaid* was not put into commission during the year, no funds having been available for manning and working her. There was, however, no lack of material for the station, the superintendent having been able to get what he required by means of the new sailing-boat purchased early in the year. The financial year closes with a deficit of £48, as compared with a deficit of £117 at the close of the previous year. A number of learned societies and other bodies help to support the association by contributions to the funds, as they recognise that the association does a good work in providing an opportunity for those interested in biological work to prosecute their studies.

Legacies to Perth and Dundee Royal Infirmaries.

At a meeting of the directors of the Dundee Royal Infirmary held on Feb. 24th intimation was made of a donation of £3000 to the general funds. This handsome sum has been allocated to the institution by the trustees on the estate of the late Mr. Chas. Anderson of Fettykil. A similar sum has been donated by the trustees to Perth Infirmary.

Aberdeen Royal Hospital for Sick Children: Annual Report.

The annual report of the Aberdeen Royal Hospital for Sick Children states that during the past year 2518 cases have been treated—734 as in-patients and 1790 as out-patients. The average stay of each in-patient was 37·29 days. 52 patients were sent during the year to the Zidda Convalescent Home, Culter. The ordinary expenditure for the 12 months was £3096 12*s*. 1½*d*., being an annual average expenditure per bed occupied of £41 5*s*. 11¾*d*. The ordinary income amounted to £1895 3*s*. 3½*d*., or £1201 8*s*. 10*d*. less than the ordinary expenditure.

Aberdeen Deaf and Dumb Society.

The annual meeting of the Aberdeen Deaf and Dumb Benevolent Society was held in the institute, Aberdeen, on Feb. 24th. The secretary intimated that a new institution was now in the course of erection. It would contain in addition to a committee-room, a chapel for the Sunday services, a reading-room with books and periodicals, a large hall for lectures and social meetings, a room for sewing and other classes, two bathrooms, and on the top floor a billiard room. A sum of £500 has been given by the Crichton trustees and a similar sum by the Clark's trustees, so that the new building will be erected free of debt.

March 1st.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Temperance Movement in Ireland.

THE vigour of the temperance movement throughout Ireland forms one of the most prominent features of Irish life at present. The annual meeting in connexion with the Father Mathew Hall, Dublin, which was held last week, was large and represented all classes of the community. The report for the year 1909 was read, and the important fact that the Irish national holiday was utilised to hold a temperance banquet in the Mansion House was recalled with great enthusiasm. The united action of the Catholic hierarchy of the Western Province gave very effective results in the same year, which have continued to increase ever since. A notable event, too, was the temperance demonstration held in Armagh under the presidency of the Catholic Primate, Cardinal Logue, at which more than 20,000 persons were present. The endeavours of the leaders are at present largely directed towards employment in labour. A register of unemployed members is kept, and it is argued that employers can best serve themselves, as well as help the temperance cause, by giving a preference to total abstainers, "men whose physical and mental energies have not been impaired by alcohol." The enlargement of the premises of the Father Mathew Hall has resulted in an overdraft of £548 at the National Bank, but it is hoped that the present year will liquidate that small liability. One of the speakers observed that "there was no manufacturer in this country who would not undertake to add 30 per cent. to his wages bill if he could get rid of 30 per cent. of the consumption of whisky among his workers."

St. Patrick's Nurses' Home, Dublin.

The annual meeting of the St. Patrick's Home "for

supplying trained nurses to the sick poor in their own homes" (affiliated with the Queen Victoria Jubilee Institute) was held last week in the Royal College of Physicians, Dublin. The chair was occupied by the Protestant Archbishop of Dublin, though the work is not limited by any sectarian considerations. The staff consists wholly of Queen's nurses and of candidates for admission to that institute, while the rules strictly forbid any meddling with the religious opinions of patients or their families. That a person is sick and poor is the only qualification for receiving the attention of the nurses. When Her late Majesty Queen Victoria had to decide what to do with the £70,000 that had been subscribed as a Jubilee offering she decided that the best use she could make of it was to maintain trained nurses to nurse the sick poor of the kingdom. The question of how to start the work in Ireland was then raised, and when inquiries were made it was found that the St. Patrick's Home had been doing for years in Dublin exactly the kind of work which Her Majesty had contemplated. The report for 1909 showed that 2300 cases had been attended during the year and that 4500 visits were paid by the nurses. Sir Charles Cameron proposed the adoption of the report, which was seconded by Mr. A. J. Horne, President of the Royal College of Physicians, and carried unanimously.

The Royal Commission on Sewage Disposal at Belfast.

With reference to the disposal of the sewage of Belfast the Royal Commission on Sewage Disposal has made to the city council the following suggestions:—

1. That the whole sewage of the city should be brought to one outfall at the northern side of the river, and that no discharge should take place on the south of the River Lagan.
2. That not less than three times the dry weather flow should be passed through the sedimentation tanks under the conditions laid down by the Local Government Board in their letter of April 27th, 1909.
3. That the existing wooden chute is inefficient, and that a properly constructed culvert or culverts should be provided capable of delivering the effluent through the sedimentation tanks during the first three and a half hours of the ebb tide at a point near to the outlet of the existing chute.
4. That as far as practicable storm outflows should be limited in the sense recommended in paragraph 294 of the fifth report of the Commission.

In the opinion of the Commission the corporation should carry out the above recommendations at the earliest possible date.

The Commission, in its communication to the authorities, suggests as desirable a conference with the Belfast Harbour Commissioners with a view to the carrying out of a scheme of reclamation of the county Down shore.

The Maternity Hospital, Belfast.

The medical report presented by Sir John Byers at the annual meeting on Feb. 24th showed that in the number of both intern (580) and extern (575) patients the past year constituted a record in the work done. The mortality was 0·19 per cent.

The Ulster Medical Society.

At a meeting of the Ulster Medical Society on Feb. 24th in the Medical Institute, Belfast, Dr. J. S. Darling read notes of two cases of Coxa Vara. Mr. Andrew Fullerton read a paper on Tubercular Kidney, with full details of 23 cases. For the information of those present he had prepared a carefully tabulated list of all the cases, giving complete information, among other points, as to the cystoscopic appearances and information obtained by the ureteral catheter. An interesting discussion followed, in which Sir John Byers, Dr. A. Dempsey, Dr. Darling, and Dr. Howard Stevenson took part.

Nurses for the Sick Poor.

The annual meeting of the Belfast Society for Providing Nurses for the Sick Poor was held on Feb. 25th, when it was reported that the total number of cases nursed during the past year had been 1521, an increase of 135 over the previous year. A new departure has been made in the nursing of the children of two of the large public schools.

Obituary: George A. Waring, L.R.C.P. & S. Irel.

The death has occurred in tragic circumstances of Mr. George A. Waring of Lisburn, county Antrim. It would appear that he left Lisburn on Saturday, Feb. 19th, to pay a visit to some property which he owned in the country near Glenavy. He was last seen alive on that day between 2 and 3 P.M. at a house where he had called. Later his cap, neckerchief, and empty field-glass were found on the opposite side of a small river, with a plank footbridge, swollen by the recent heavy rain. Here there is a bank 15 feet deep to the water edge and there were marks on the slope as if a body had rolled down. About a mile from this spot the deceased's body was found later, but neither his watch nor great coat was recovered. At the inquest the jury returned a verdict of "Accidental drowning," and expressed their deep sympathy for his widow, family, and relatives. Mr. Waring was only 46 years of age. He obtained the L.R.C.P. & S. Irel. in 1888. He was the youngest son of Mr. Lucas Waring, solicitor and land agent, of Lisburn. Succeeding to ample means, he was not obliged to practise. Great sympathy is felt for his widow and three daughters.

Ballymena Union Infirmary.

At a meeting of the Ballymena board of guardians held on Feb. 26th a letter was read containing a report by the Local Government Board medical inspector, Dr. E. C. Bigger. It would appear that the medical officer of the infirmary attributed the occurrence of erysipelas to defects in the sanitary state of the place. After condemning the defects in the building, Dr. Bigger wrote that, having regard to its age and its defects, the guardians would be well advised to waste no more time in trying to improve it, but would be wiser to proceed to erect a new infirmary on modern lines on a better site in their own grounds. The report has been referred to a committee.

March 2nd.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Professional Etiquette and the Medical Work of the Education Department.

THE general council of the district medical societies has expressed strong disapproval of a circular recently issued by the Ministry of Public Instruction relative to the health of the pupils in elementary schools, especially as regards the care of their teeth. The council takes the view that this circular is an encroachment on the rights of family practitioners, and a deputation has been sent to the Ministry of Public Instruction to protest against it. This deputation reminded the Minister that it is the duty of the State to see that the sanitary condition of the schools is above reproach and to protect the pupils entrusted to its care against any danger of infectious disease, but that as regards the health of individual pupils the State is authorised only to deal with cases of acute illness of which the parents are not yet cognisant, and has no authority whatever to make inquiries as to constitutional diseases which the pupils may suffer from. This is a matter for the parents only, especially when the children belong to well-to-do and intelligent middle-class families who ought to have the control of their children in their own hands. The medical profession would not allow the work of family practitioners to be called in question by a medical man appointed by the school managers, and yet this irregular state of matters is explicitly arranged for in the above-mentioned circular in reference to the care of the teeth. A protest was made against the introduction of a medical history sheet on which would be entered all the constitutional defects of the pupils. It was said that in practice this information would become disclosed, the rule of professional secrecy would be broken every day, and the reputation of families would suffer. The ministerial circular, moreover, contains advice on the hygiene of the mouth, together with the names of pharmaceutical preparations to be used and the doses of them, a system which is to some extent an illegal practice of medicine, and in any case tends to establish official methods of treatment in comparison with which the public would regard other methods of treatment as inadequate and unsatisfactory.

A New Antityphoid Vaccine.

At a meeting of the Academy of Sciences held on Feb. 14th Dr. Vincent, professor in the military hospital of Val de Grâce, made a communication relative to the immunisation of the human subject against typhoid fever by means of a new antityphoid vaccine. He said that the vaccines or antigens which had shown themselves the most active in his experiments were: (1) living bacilli; (2) bacilli killed by a temperature from 53° to 55° C.; and (3) the autolysate at 37° C. of a 24-hours culture of bacilli grown on agar-agar. The autolysate was centrifuged and sterilised by means of

ether. Whatever vaccine might be employed three inoculations were necessary to ensure immunity. The most active "living vaccine" could not be recommended for use on the human subject, notwithstanding the results obtained by Castellani, because it might prove to be dangerous. The "dead vaccine" (Pfeiffer and Kolle, Wright, and Leishman) has shown itself very protective in the case of animals and has yielded favourable results in the case of German and English soldiers in the colonies. It often, however, causes very disagreeable symptoms, such as sharp local pain, œdema with lymphangitis, and pyrexia, which have hitherto prevented an extensive use of it. Vaccine III., suggested by Dr. Vincent, showed in his experiments a high protective power. Containing extracts of living bacilli which were in possession of their normal biological properties, not attenuated by heat, this vaccine exhibits some of the qualities of the most active of these substances—namely, the "living vaccine," but without any of its accompanying disadvantages, such as sharp pain and pyrexia. In animals it invariably produced lasting immunity. Moreover, in consequence of their comparatively mild action the products of autolysis, unlike some other substances of the same class, did not produce the negative phase which was so dangerous during the prevalence of an epidemic, because the vaccinated individual remained for one or two weeks hypersensitive to infection by Eberth's bacillus. Dr. Vincent, therefore, concludes that the best method for the antityphoid vaccination of patients consists in the injection of "autolysants" of living bacilli.

After the Floods.

It is more than a month since the Seine ceased to overflow its banks, and now the river rises and falls only a few centimetres daily, according to the amount of the rainfall. But for some time there has been no water in the streets of Paris, except for a few centimetres in one or two roadways of the low-lying quarters of Passy and Bercy. Only suburban districts, and chiefly Alfortville, are still in any distress. The telephonic and electric services have been restored for some time, and even the Metropolitan Railway has resumed over a considerable part of its course its usual service of trains. The only unfavourable tidings of the health of Paris emanate from the foreign journals. In these quarters there have been exaggerations which, after exciting in the first place a vast movement of charitable sympathy that touched us all deeply, now threaten, if they should continue so far to outstrip the truth, to do as much harm to the city of Paris as the floods themselves have caused. Many of these foreign newspapers make out that Paris is still submerged in the river and ravaged by epidemics. Some of the Riviera hotels, in their anxiety to keep their customers for a longer time, have the impudence to hang up notices announcing that trains are not certain of arriving in Paris. As to the sanitary state of the city, not only have all the predicted epidemics failed to appear, but the statistics published each week, as is customary by the Municipal Bureau of Health, show that both the disease- and death-rates are actually below what they have been for corresponding periods in preceding years. This is not as paradoxical as it seems, for it shows that the public have been taking full advantage of the advice which has been given them for the preservation of their health and have thought more about sanitary matters in general than has been their wont.

March 1st.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

A Ferment Treatment for Tuberculosis.

AT a recent meeting of the Gesellschaft der Aerzte Dr. Schiller read a paper on the Treatment of Tuberculous Lesions of the Soft Tissues by Means of Ferments. Tuberculous pus is very poor in ferment bodies, since it contains a very small number of polynuclear leucocytes, which are the ferment carriers. Dr. Schiller has evolved the following method of treatment. He punctures the abscess, removes the pus by aspiration, and then injects a 1 per cent. sterile solution of trypsin into the abscess cavity. The trypsin digests the albuminous bodies and allows of the immigration of leucocytes. Dr. Schiller has treated a large number of cases in this way, performing the aspirations and injections daily. Altogether from three to four injections were sufficient to bring about a cure in many instances. Under the influence of the injections the pus changes its character and consistency, granulations appear, and the secretion diminishes. The treatment gives rise to very little discomfort; it is not more painful than any other injection method, especially the one used mostly on the continent (iodoform-glycerine emulsion). Fever may appear at the commencement of the treatment, but it is generally of no importance. Besides tuberculous abscesses, serous inflammations, sero-synovitis of the knee, hydrocele, and bursitis have been treated by this method, which, however, failed to give good results in cases of tuberculous joints.

A New Radium Spring in Joachimsthal: Sale of Radium Salt.

During a search by the Government for radio-active waters in Joachimsthal a new and very powerful spring has been discovered, which gives off a quantity of 15 litres (30 pints) per second, has a temperature of 19° C., and is said to be the most powerful natural radio-active water in the world; its voltage has been stated to be 24,000, but exact scientific figures are as yet lacking. The quantity of water will be sufficient to enable the existing bathing establishment to give another 150 baths daily, altogether making possible about 500 baths per day. The bathing is now under the control of a public officer of health, and the efforts of the medical profession have averted the danger of this important health resort coming under the influence of unscrupulous speculators. Whilst last year the arrangements for bathing in the radio-active waters were rather primitive, this year first-class accommodation for patients has been supplied by the corporation, and health-seekers can enjoy their benefit all the year round. The valuable products obtained from the pitchblende of Joachimsthal are also controlled by the Government, which has taken the sale of radium into its own hands. The substance will appear in three different qualities (or strengths): 10 per cent., 25 per cent., and 50 per cent. radium-barium-chloride. It is sold in small round metal capsules, the floor of which consists of lead. This has a small square depression in which the radium is deposited. A sheet of mica closes this depression on the outside, so that it can be covered by another plate of lead. It is thus possible to use the salt for exposures without opening the capsule. An official hall-mark, as a proof of the genuineness and correctness of percentage and weight, will be impressed on the brass capsules. The price per milligramme (1-60th of a grain) has been fixed at 400 kronen (about £16 16*s.*, or £1005 a grain).

Health Statistics of Labouring Classes in Vienna.

For several years the "Arbeiter Kranken-Kasse" (Working Men's Friendly Society and Sick Club) has issued regular reports on the health of its members, which are a very useful means of judging the average health conditions of the working classes of this city. On Jan. 1st, 1909, the number of the members of this sick club was 320,000, or 16 per cent. of the total population of Vienna. The report No. 1 gives the figures for December, 1909. There were 9092 members on the sick list unable to earn their regular living. The majority were suffering from diseases of the respiratory and circulatory systems; tuberculous affections of the lungs and larynx accounted for 800, other affections of these organs for 1346, tonsillitis for 450, pneumonia for 42, rheumatism for 805, and cardio-vascular affections for 510 cases. Affections of the alimentary canal were somewhat fewer than usual, their number being 626. A remarkable drop was noticed in accidents during work, perhaps owing to the three holidays which were celebrated in December. The number was 1638, against 1969 in November. The number of deaths during the last month of 1909 was 274, of which tuberculosis claimed 40 per cent., neoplasmata 5 per cent., whilst 2 per cent. were due to accidents and 4 per cent. to suicide. The report No. 2 for the whole year 1909 is still more interesting. There were altogether 115,530 persons on the sick-list as unable to earn their regular income. The numbers are distributed for each quarter of the year, showing a constant fall in the rate of morbidity—36·0, 29·0, 22·0, and 13·0 per cent. respectively. The most important disease is still tuberculosis, which alone claimed 9·5 per cent. (or 11,163) of the patients, whilst other respiratory organic diseases caused

another 13·0 per cent. of all the cases. 20,257 accidents, or 17·5 per cent. of all notifications of disease, were observed in this one year. The number of deaths in 1909 amounted to 3382 (out of 320,000 members). Here, too, a constant fall is evident if the quarters of the year are considered separately, January–March showing 944 deaths, and October–December only 734. 44·0 per cent. of all deaths were due to tuberculosis, 12·0 per cent. to cardio-vascular disorders, and 3·0 per cent. to accidents. The figures show that tuberculosis is the worst danger and that the movement for erecting sanatoriums for consumptives is a perfectly business-like means to reduce the appalling expenditure due to mortality and also morbidity from this source.

Feb. 28th.

CANADA.

(FROM OUR OWN CORRESPONDENT.)

Echinococcus Disease in Canada.

BEFORE the Section on Surgery of the first meeting of the Medical Associations of the Pacific Northwest, held at Seattle, Washington Territory, U.S.A., in July last, Dr. Robert E. McKechnie (Vancouver) read a paper on this subject, particularly confining himself to the incidence of the disease in British Columbia. In order to incorporate in his paper statistics from all over Canada Dr. McKechnie addressed letters to the leading hospitals of the Dominion. From the superintendent of the Toronto General Hospital it was learned that there had not been a case of echinococcus in the records of that institution. The Royal Victoria Hospital, Montreal, reported two cases in the last 15 years. Winnipeg did not send any statistics to Dr. McKechnie, although he learned later that they reported about 160 cases, 100 occurring in the service of the Winnipeg General Hospital. In America the largest personal list of cases reported was that of Dr. Alexander Hugh Ferguson of Chicago, but before going to Chicago Dr. Ferguson was a practitioner in Winnipeg, and on the shores of Lake Manitoba there is an Icelandic settlement from which practically all the cases have been drawn. Dr. McKechnie wrote to all the practitioners in British Columbia for reports of cases. New Westminster reported 1 case, Victoria 4 cases, and Vancouver furnished 7 cases. Of the 12 cases recorded in British Columbia 6 were male and 6 female. Five were from the British Isles, 4 from Iceland, 1 from Finland, 1 from Eastern Canada, and the origin of one not stated. The ages varied from 20 to 55. Eight of the cases had the liver as the seat of the disease. One gave a duration of 34 years. At the annual meeting of the Canadian Medical Association held in Winnipeg last August Dr. B. J. Brandson, attending surgeon to the out-patient department of the Winnipeg General Hospital, read a paper on the same subject and reported 100 cases diagnosed during life and one case found post mortem which had occurred in the service of this hospital. Of these 100 cases 96 were born in Iceland, 2 in England, 1 in Russia, and 1 in the province of Ontario, Canada, shortly after the arrival of its parents in that province. This was the only case of a native-born Canadian treated in the Winnipeg General Hospital. The longest time elapsing before arrival in this country and admission to the hospital was 25 years. Of the 100 52 were males and 48 females, although most Icelandic observers have noted the incidence of the disease to be more in females. The youngest patient in this series was five years old and the oldest 67 years of age, whilst more than half of them were between the ages of 20 and 40 years. 80 suffered from hydatids of the liver alone. Of the total number 70 were discharged cured or improved, 18 died, 4 were discharged unimproved or incurable, and 8 for various reasons were not treated. Ten years ago before the Toronto Clinical Society the late Dr. George A. Peters of Toronto reported a case of hydatid of the pancreas upon which he had operated for Dr. McKinnon of Guelph, Ontario. This young man was of Spanish origin, attending the Agricultural College at Guelph, from the Argentine Republic, South America.

Typhoid Fever in Montreal.

Montreal is recovering from an extended outbreak of typhoid fever, due to the disgraceful character of its drinking water. So intense did the situation become, the hospitals being all taxed beyond their capacity, that it became necessary to call upon the city council to establish and maintain a temporary emergency hospital. This the council refused to do and the matter was taken up by the citizens, who were materially aided by Lord Strathcona's immediate contribution by cable of $25,000, and promise of $100,000 if a fund for a purer water-supply were started by the citizens. Dr. J. J. Guerin in the recent municipal elections ran for the office of mayor and was elected by a large majority; and another prominent member of the profession, Dr. E. P. Lachapelle, was elected a member of the new Board of Control.

Violent Deaths in Montreal during 1909.

Some 800 cases of violent and sudden death occurred in Montreal during the year 1909. This number is larger than in recent years, but the majority of the cases were due to natural causes. There were no direct cases of murder during the year, but there were some half-dozen cases in which a verdict of manslaughter was returned. The suicides numbered seven. Street-car and railway accidents claimed the greater number of victims, there having been over 100 deaths caused by trains about the city and by the electric cars. Deaths by electrocution and by drowning were also high, reaching 60. Only three deaths occurred in factories, whilst fires caused the loss of 20 lives, and asphyxiation by gas five.

A New Social Medical Society in Toronto.

Dr. G. Stirling Ryerson, who took a prominent part in organising a new social society in Toronto amongst the medical fraternity, has been elected its first president, with Dr. H. J. Hamilton as secretary and Dr. E. E. King as treasurer. The society is limited to 60 members, who must have been at least ten years in practice, and was started with the object, as the president stated in his address at the first meeting on Jan. 14th, of providing for a more extended measure of social intercourse amongst its members. The society, which is called the Æsculapian Society, will meet during the winter months six times a year, and the proceedings are mainly of a social character. At the first meeting the Hon. Justice Riddell delivered an address on the relation of law to medicine, and at the meeting in February Dr. Rupert Mitchell, now of Toronto, who was with the Shackleton expedition, will be the speaker.

Toronto General Hospital.

The annual meeting of the Toronto General Hospital was held early in February, when it was reported that during the last hospital year there were treated in the institution 5104 patients, 4522 of them having been admitted during the year. There were 302 births in the maternity wards. Of the 5104 patients, 4146 came from Toronto and 16 from the United States, the balance from other places in Ontario and Canada. The average stay per adult patient was 23⅛ days, giving a total of 110,905 patient days. The expenditure in maintenance was $151,971.61, giving a daily average cost per adult patient of $1.3702. The total revenue from endowment income account was $34,828.58. The total assets now amount to $1,108,098.49, and there were liabilities outstanding of $30,362 68. The report of the pathologist showed that the number of surgical specimens examined was double that of the previous year, and that in 296 deaths in the institution post-mortem examinations were held on 118. An increase of 482 patients was reported over the previous year. In the extern midwifery department 94 patients were treated by students registered at the hospital without any mortality. In the new nervous wards 74 patients were treated, of whom 49 were discharged, 16 having recovered, 30 improved, and 3 unimproved. Progress has been made towards the erection of the new hospital to the extent that the ground has all been cleared of the buildings upon the site, and the work of erection is to commence early in the spring.

The Conservation of Human Health.

Several months ago the Dominion Government appointed a special commission on the Conservation of the Resources of Canada, with the Hon. Clifford Sifton, M.P., as chairman thereof. One of the sections of this commission will be known as the Public Health Section, of which section Mr. E. B. Osler (brother of Professor Osler), will be chairman. They will proceed to evolve a plan whereby the health of Canadians may be preserved and will probably direct their attention to the special subject of tuberculosis. In the past the Government has done a great deal in the

way of prevention of disease amongst animals, but outside of making an annual grant of about $5,000 to the Canadian Association for the Prevention of Tuberculosis nothing of very great moment has been done towards conserving human health. It is expected in medical quarters that this section on public health will pave the way towards a department of public health for the Dominion.

Ontario Medical Council.

The Ontario Medical Council is approaching the Ontario Legislature now in session, looking for an amendment to the Ontario Medical Act in the direction of giving to the Council disciplinary powers over medical men guilty of conduct disgraceful in a professional respect at once on satisfactory evidence instead of at present waiting until the annual meeting of council, which is generally held in July of each year. At a recent special meeting of Council two names were ordered to be removed from the Register, and it is felt that the Council could deal wisely with these cases immediately, and thus save the uncalled-for criticism it from time to time receives in the public press for not acting in advance of even the criminal courts.

Deaths of Prominent Physicians in Canada.

Death has been busy amongst the prominent physicians of Canada early in 1910, including two well-known veterans of the schools. Dr. James H. Richardson (Toronto) died on Jan. 15th, at the age of 86 years. Of him a separate obituary notice is sent (see p. 688).

Dr. Arthur A. Browne, after a year's serious illness, died at the end of January in Montreal. He was one of the best known practitioners of medicine in that city, and was looked upon as the dean of the medical profession of Montreal. The late Dr. Browne was born in the province of Quebec in 1847, and was graduated in arts and medicine from McGill University in 1872. He then went abroad for some years and studied at Dublin and Vienna. On his return to Montreal he joined the staff of McGill's medical faculty as a professor of clinical medicine, but a rapidly increasing practice caused him to give up teaching medicine.

Dr. Uzziel Ogden (Toronto) died in January, aged 82 years. He began his medical studies in Toronto in a room over a driving shed, with but one lecturer, and saw that medical school develop to one of the greatest on this continent, with a Medical Faculty of over 60 professors and lecturers and a medical student roll of from 500 to 600. He, too, was an early pupil of Dr. Rolph. He successively held the chairs of physiology, materia medica and therapeutics in the University of Toronto, but ended as professor of obstetrics and gynæcology for the last 17 years of his teaching life. He was one of the forerunners in Canadian medical journalism, and was for a time associated with Dr. Rolph and Dr. Fulton in the conduct of *The Canada Lancet*, the oldest medical journal in Canada. He was the founder, and for many years the editor, of the *Canadian Journal of Medical Science*, now the *Canadian Practitioner and Review*.

Toronto, Feb. 5th.

PELLAGRA INVESTIGATION COMMITTEE.—The officers of this Committee have now been selected as follows: Chairman, Sir T. Lauder Brunton; vice-chairman, Dr. F. M. Sandwith; honorary secretary and treasurer, Mr. J. Cantlie; advisory subcommittee, Mr. E. E. Austen, Professor E. C. Bayly, Sir William Leishman, Dr. J. M. H. MacLeod, Sir Patrick Manson, Sir John McFadyean, Dr. F. W. Mott, and Professor Ronald Ross. The field-workers will be Dr. Louis W. Sambon, of the London School of Tropical Medicine, whose work is well known on the subject, and Captain J. E. Siler, with Mr. Arthur Dawson-Amoruso and Mr. G. C. C. Baldini as assistants. Captain Siler is a distinguished American officer who has worked and written on the subject of pellagra in the United States, and has been studying tropical medicine lately at the London School. Mr. Baldini, a medical student at St. Bartholomew's Hospital and a native of Italy, will help with his knowledge of the language and localities when the field-workers start their labours in a pellagrous area in Italy; and Mr. Dawson-Amoruso, also an Italian scholar, is an expert microscopist. The Standing Commission for the Investigation of Pellagra in Bergamo has promised the inquiry every assistance, which starts, therefore, under favourable auspices.

Obituary.

JOHN W. TAYLOR, M.D. BRUX., F.R.C.S. ENG., M.SC. BIRM.,

PROFESSOR OF GYNÆCOLOGY IN THE UNIVERSITY OF BIRMINGHAM

WITH much regret we record the death of Dr. John W. Taylor, professor of gynæcology in the University of Birmingham, which occurred at his residence, 22, Newhall-street, Birmingham, on Feb. 27th, after a prolonged illness from heart disease and its attendant complications.

Dr. Taylor was born at Melksham, Wiltshire, in 1851, his father being the Rev. James Taylor, a Suffolk clergyman. He received his early education at Kingswood School, later becoming a student at Charing Cross Hospital, where he worked with much diligence. He duly became assistant demonstrator of anatomy at the hospital and then held resident appointments both on the medical and surgical sides. In the year 1877 he took the degree of M.D. Brussels, and in the same year he obtained the F.R.C.S. Eng., migrating from London to Birmingham in 1878. In Birmingham he commenced practice as medical officer to the Provident Dispensary at Camp Hill, entering also into private practice in the same locality. But the professional aims which he had set before him were not fulfilled in the duties of such a career, and he early resolved to forsake private work for gynæcology, in which he believed that his training and abilities could find a wider scope. He began by securing in 1884 an appointment as honorary surgeon to the Birmingham and Midland Hospital for Women, and henceforth devoted his full powers to his special subject, this post affording him ample opportunities of studying. In a short time he became assistant to Mr. Lawson Tait. Though differing widely in many ways of temperament and character from that remarkable man, there is no doubt that the association with Tait, the contact with his genius and originality, and the chances afforded by association in his vast surgical practice had an important influence upon Dr. Taylor. When Tait died in June, 1899, he held the post of professor of gynæcology at Queen's College, Birmingham, and here Dr. Taylor succeeded him; and when the University of Birmingham was opened in the year 1900 Dr. Taylor became the first professor of the same subject therein. He was President of the Midland Medical Society 1897–98, and Vice-President of the Obstetrical Society of London in 1904. He was also consulting surgeon to the Wolverhampton Hospital for Women, and consulting gynæcological surgeon to the Birmingham and Midland Skin and Lock Hospital.

For 25 years Dr. Taylor maintained an active interest in the Midland Hospital for Women and did valuable work upon the staff, not only scientifically but in administration and detail. It was, therefore, with great regret that his colleagues learned that owing to failing health he felt compelled, while still in the prime of life, to resign his appointment. Finding from the same cause that he was unable to continue his lectures at the University, he also resigned his professorship a month ago in the hope that with more time and care he might obtain some degree of restoration of health. Unfortunately, this expectation was not realised, for with alternations of improvement and relapse he gradually lost ground and died as above stated.

Dr. Taylor made many valuable contributions to the literature of gynæcology. Jointly with Dr. Frederick Edge he translated and edited Duhrssen's "Manuals of Gynæcological and Obstetric Practice." In 1898 he delivered the Ingleby Lectures on Extra-uterine Pregnancy, which were published in full in THE LANCET, and in the following year he issued his work upon the same subject entitled, "On Extra-uterine Pregnancy: a Clinical and Operative Study." This work at once disclosed him to the whole medical profession as a leading authority upon the subject, and its teaching everywhere met with high approval. He also contributed the article on Disorder and Diseases of Pregnancy to Quain's "Dictionary of Medicine" (1902 edition), and wrote many articles on allied subjects in the *British Journal of Gynæcology* and in the *Birmingham Medical Review*, as well as in THE LANCET and the *British Medical Journal*. On his election as President of the British Gynæcological Society in 1904 he gave his inaugural address on the Diminishing Birth-rate, a subject in which he was much interested. Dr. Taylor's

literary attainments were, moreover, not confined to professional matters. In 1906 he published a work of considerable interest, "The Coming of the Saints," to which he gave a supplementary title, "Imaginations and Studies in Early Church History and Tradition." In this book, tracing the journeyings of the various saints, he describes their advent in a clear and charming style of writing, with excellent illustrations selected after close personal study. Much time, indeed, was spent in diligent preparation of materials for this work. For years Dr. Taylor spent his annual holiday in visiting the scenes which he later depicted in his narrative, and in collating and verifying the information obtained. The resulting work displays his enthusiasm, literary capacity, and erudition.

Dr. Taylor was a man of high ideals and principles. When he had made up his mind upon any particular subject it was difficult to get him to alter it, but this firmness of conviction engendered confidence among his patients and his friends. They recognised that his assurance must be well founded, and that it was the result of ripe experience and mature deliberation. He did not bring these qualities to bear upon any of the problems of public life, for he took no part in the political or municipal conflicts of the city. He was an ardent Churchman of the modern type, strict in his observances as interpreted by modern thinkers. In Church matters and those affecting social progress he was always ready to help. He married the daughter of the late Dr. Buxton, a London practitioner, and leaves behind him a widow and five children.

His interment took place at Northfield Church on Wednesday last and was attended by a number of professional brethren and personal friends who assembled to pay a tribute to his high character and his many claims upon their esteem and regard.

JAMES HENRY RICHARDSON, M.B. KING'S COLLEGE, TORONTO, M.R.C.S. ENG., M.D. TORONTO UNIVERSITY,

LATE PROFESSOR OF ANATOMY IN THE UNIVERSITY OF TORONTO.

Dr. James Henry Richardson, the oldest medical man in Toronto, who is said to have chosen the maple leaf as the national emblem of Canada, died at midnight on Saturday, Jan. 15th, at St. Joseph-street, Toronto. The sad event was not unexpected, as he had been in failing health for more than a year. A patriotic Canadian, Dr. Richardson had many claims upon the respect and esteem, not only of the medical profession of Toronto, but of the citizens generally. The history of medicine in that city, where he spent 83 years of his long life, is to a considerable extent bound up in his career. He was born in 1823 at Presqu' Ile, in Northumberland County, Ontario, but three years subsequently his father, the late Bishop Richardson of the Reformed Episcopal Church, settled in Toronto. He commenced his medical studies with the well-known Dr. John Rolph, who was then living in exile at Rochester, New York, on account of his participation in the Canadian rebellion of 1837. In 1844 he went to London and completed his medical course at Guy's Hospital, taking the diploma of M.R.C.S. Eng. When in London he witnessed the first demonstration of the use of ether, while he was the first Canadian to receive the Membership of the Royal College of Surgeons of England. In 1847 he began practice in Toronto, and in 1848 graduated as M.B. of King's College in that city. In 1850 he was admitted M.D. of the University of Toronto, and in the same year he accepted the chair of Anatomy, in succession to Dr. Henry Sullivan, in the then newly-constituted department of medicine of the University of Toronto. Dr. Richardson held this position until the medical department of the University was abolished in 1853, and when the medical faculty was reorganised he was again appointed Professor of Anatomy. Upon the reconstitution of the medical faculty of the University in 1902 he retired. He was therefore a teacher of anatomy for a period of about 50 years. He was greatly liked and respected by the students and in 1903 a large number of his old pupils presented his portrait to the University.

In 1858 he was appointed surgeon to the Toronto Gaol, which post he likewise held for about 50 years, retiring in 1909. Dr. Richardson was a member of the first staff of Toronto General Hospital, which was founded in 1854, and he was the last survivor of the original body. He was at one time President of the Ontario Medical Council and a member of the Upper Canada College Council. He was for many years connected with the militia, and was given a medal for active service during the Fenian raid He was Surgeon-Major of the 10th Royal Grenadiers and surgeon in the old Merchants' Company, which was subsequently merged in the Queen's Own Rifles. In his earlier days, and when in the prime of life, he was considered to be one of the best rifle shots in Canada and was the winner of many trophies. His favourite amusement was fishing; it was said of him that he had fished in every stream from Cape Breton to Port Hope. Dr. Richardson was a man of goodly presence, courteous and genial in manner, and together with literary gifts of a high order was possessed of a keen sense of humour. Some few years ago he wrote an amusing sketch of a method of medical treatment in vogue in the early "thirties," when the now beautiful city of Toronto was known as "muddy little York." This treatment was termed "Thompsonism" and derived its name from its originator, and Dr. Richardson made excellent fun of its absurdities.

Dr. Richardson's wife died in 1907 and seven children survive him. The funeral took place on Tuesday, Jan. 17th, on which day, as a mark of respect to the memory of the deceased, no lectures were delivered in the medical faculty of the University.

ARTHUR WILLIAM WHEATLY, M.B. DURH., M.R.C.S. ENG., L.S.A.

WE regret to announce the death, on Feb. 13th, of Dr. Arthur William Wheatly of South Kensington, at the age of 54 years. Dr. Wheatly was a St. Bartholomew's man, and at the hospital as a student he was known from the first as industrious and painstaking. In 1880 he obtained the gold medal for materia medica of the Apothecaries' Hall and other honours from the teaching and examining bodies. A career which began so well developed into that of a trustworthy and skilful practitioner. He took pains to qualify himself in various special departments—as, for instance, in orthopædic work, public health, and in ophthalmology. He was specially attracted by the latter, and having been appointed assistant surgeon at the Western Ophthalmic Hospital he ultimately became senior surgeon and at the time of his death was consulting surgeon. But his friends always regarded him as a most reliable general practitioner. Soon after settling in Kensington some 25 years ago he succeeded to the practice of Dr. James Lattey, who held him in very high esteem. He was successful in diagnosis, and had also a full knowledge of drugs and was cautious in their use. He had a high sense of what was due to his professional brethren, who always found him courteous and helpful. He had been in failing health for a long time, but at the end only took to his bed for about a month before his death.

AUGUSTIN LE ROSSIGNOL, M.D. ABERD., M.R.C.S. ENG., L.R.C.P. LOND.

Dr. le Rossignol, one of the oldest practitioners in Jersey, died on Feb. 18th, after a very short illness. He was born in Jersey in 1842, and received his medical education at the London Hospital and the University of Aberdeen. He became M.R.C.S. in 1866, L.R.C.P. in 1867, and graduated as M.B., C.M. at Aberdeen in 1867, and M.D. the following year. After serving as assistant resident medical officer at the London Hospital he commenced practice in his native island and soon attained a prominent position in professional and public life. One of the original members of the Jersey Medical Society, he was for many years its secretary and afterwards its President. He was also an original member of the Société Jersiaise and took much interest in its work, especially in the prehistoric archæology of the island. For many years he was one of the honorary medical officers of the Jersey Dispensary, and was later appointed consulting surgeon to the institution. He also served for many years in the Militia of the island, and was for a long time Medical Inspector-General. In 1903 he was elected a jurat of the Royal Courts, and he devoted much of his time to the public duties which that position involved. Not long ago he retired from practice, but he continued in the active performance of his public work up to the time of his death. As late as Feb. 15th he attended a meeting of the States, though he had not been well for some days. On the following day he was found to be very seriously ill, suffering from influenza and broncho-pneumonia, and he died on the fourth

afternoon of his illness. He was a man of sound judgment, of upright character, with mental abilities of a high order—qualities which made their mark on his professional and public work. His loss will be deeply felt by his professional brethren, by his colleagues on the bench and in the States, and by a wide circle of patients and friends. All knew his goodness of heart and his sterling qualities, and very many have cause to remember gratefully his professional skill and his devoted kindness.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—At examinations held recently the following candidates passed in the subjects indicated:—

Surgery.—N. L. Clarke (Sections I. and II.), Cambridge and London Hospital; A. Cordon (Section I.), Birmingham; A. H. C. Dawes (Sections I. and II.), Westminster Hospital; H. P. Jelley, Edinburgh; O. R. Kelly (Sections I. and II.), Westminster Hospital; J. G. Morgan (Sections I. and II.), London Hospital; R. Rowlands (Section I.), Glasgow and Westminster Hospital; H. S. Tumber (Section I.), Sheffield; A. Whitby (Section II.), Dublin; and G. F. Wilson (Section I.), London Hospital.

Medicine.—N. L. Clarke (Sections I and II.), Cambridge and London Hospital; H. P. Jelley, Edinburgh; J. G. Morgan (Section II.), London Hospital; J. K. Nariman (Section I.), Bombay and St. Mary's Hospital; E. Newhouse (Sections I. and II.), Leeds; L. M. Potter (Section I.), Geneva and Royal Free Hospital; A. H. Rich, (Section I.), University College Hospital; H. T. Roberts (Section I.), St. Mary's Hospital; and H. S. Tumber (Sections I. and II.), Sheffield.

Forensic Medicine.—N. L. Clarke, Cambridge and London Hospital; R. Eyton-Jones, Liverpool; H. P. Jelley, Edinburgh; L. M. Potter, Geneva and Royal Free Hospital; and W. H. Watson, Guy's Hospital.

Midwifery.—N. L. Clarke, Cambridge and London Hospital; J. B. Holmes, Manchester; and O. R. Kelly, Westminster Hospital.

The Diploma of the Society was granted to the following candidates, entitling them to practise medicine, surgery, and midwifery:—N. L. Clarke, A. H. C. Dawes, O. R. Kelly, J. G. Morgan, and A. Whitby.

FOREIGN UNIVERSITY INTELLIGENCE.—*Pisa:* Dr. Gian Giacomo Perrando of Catania has been appointed Professor of Forensic Medicine in succession to Dr. M. B. Sadun, resigned.

LISTER INSTITUTE OF PREVENTIVE MEDICINE.—The following appointments have recently been made by the governing body:—Mr. H. R. Dean, M.A., M.B., B.C. Oxon., M.R.C.P. Lond., and Mr. G. H. Macalister, M.A., M.D. Cantab., D.P.H., assistant bacteriologists to the institute; Mr. H. McLean, M.A., M.D., Ch.B. Aberd., senior assistant in the Biochemical Department; Mr. Ashley Cooper, B.Sc., Jenner Memorial research student; Mr. Roland V. Norris, M.Sc., Grocers' Company research student; and Mr. S. G. Paine, F.I.C., research student in the Chemical Department.

THE MANUFACTURE OF MEAT EXTRACT.—An interesting reception was given at the model Oxo factory in Southwark on Feb. 23rd by the Right Hon. Sir Henry E. Roscoe and the directors of the Lemco and Oxo Company. Amongst a distinguished gathering of eminent scientists were Sir William Crookes, Sir Edward Thorpe, Sir W. Tilden, Professor Raphael Meldola, Dr. Hugo Muller, Dr. J. Emerson Reynolds, Dr. S. W. J. Smith, Dr. J. T. Hewitt, Dr. J. C. Cain, Dr. W. R. Cooper, M.A., Mr. Arthur W. Crossley, Mr. Martin Onslow Forster, Mr. C. E. Groves, Mr. Charles A. Keane, Mr. A. J. Greenaway, and many others. Sir Henry Roscoe, assisted by Mr. Robert L. Gunther (vice-chairman of the company) and Mr. Maurice Glyn (a director), conducted the guests through the factory. The process of blending the nourishing fibrine of beef with the stimulating extract of beef to make Oxo was fully explained, as also were the processes connected with the manufacture of Lemco and of nursing Oxo, a hospital form of Oxo containing peptone of beef, and largely used for invalid dietary. The scientific, hygienic, and sanitary arrangements caused favourable comment from all those who appreciate the true value of such an organisation. Sir William Crookes, in proposing a vote of thanks to Sir Henry Roscoe and the directors, said that he had examined the different processes with profound interest, and he was pleased to see the important part which chemistry played in the scientific organisation of this huge concern, not only in the laboratories here in London, where every batch of concentrated beef sent from the Argentine factories was carefully analysed and tested, but also on a much larger scale in the South American factories themselves. Sir William Tilden, in seconding the resolution, expressed the hearty concurrence of himself and his fellow scientists in all that Sir William Crookes had said.

A NEW CONVALESCENT HOME IN CORNWALL.—The "William Henry Williams Convalescent Home," which is to be established at Liskeard, will be opened in June. The institution will provide accommodation for about 25 patients.

UNIVERSITY OF OXFORD.—In congregation holden on Feb. 15th the degree of Bachelor of Medicine and Surgery was conferred on George Harold Cross, Balliol College, and Henry Pratt Newsholme, Balliol College. The statute relating to the examination in preventive medicine has been amended by Convocation so as to allow of the examination being held twice a year, in Michaelmas and in Easter or Trinity terms.

LONDON SCHOOL OF CLINICAL MEDICINE.—A dinner of the staff and students of the London School of Clinical Medicine (Post-Graduate) will be held, under the presidency of Sir James Crichton-Browne, at Princes' Restaurant, Piccadilly, on Tuesday, March 15th. The occasion is of special interest, as this is the first session in which the naval surgeons have been seconded for study at the school. The Director-General of the Navy and the President of the Royal Society, Sir Archibald Geikie, will be guests of the school upon this occasion.

SUSSEX COUNTY HOSPITAL, BRIGHTON.—The announcement was made at the annual meeting of the governors of the Sussex County Hospital at Brighton, on Feb. 24th, that in order to complete the endowment of the pathological institute founded by Mrs. Stephen Ralli that lady intended to settle on it a further capital sum of £5000 in addition to what she had already given. It was explained that the money was not available for the general purposes of the hospital, but was for the upkeep of the laboratory and its staff, and the hospital committee joined with the lady in the hope that it might be the means of advancing medical science in the alleviation of human suffering.

MEDICAL SICKNESS AND ACCIDENT SOCIETY.—The usual monthly meeting of the executive committee of the Medical Sickness, Annuity, and Life Assurance Society was held at 429, Strand, London, W.C., on Feb. 18th. There were present: Dr. F. de Havilland Hall (in the chair), Dr. M. G. Biggs, Dr. J. Pickett, Dr. W. A. Dingle, Mr. J. Brindley James, Dr. H. A. Sansom, Dr. F. C. Martley, Dr. Frederick S. Palmer, Dr. W. Knowsley Sibley, Dr. F. J. Allan, Mr. J. F. Colyer, Dr. J. W. Hunt, Mr. H. P. Symonds, Mr. Edward Bartlett, and Dr. J. B. Ball. The accounts presented showed that the business of the society during the month of January had been satisfactory. The claims, as is usual at this time of the year, have been somewhat numerous, but for the most part of a light nature and of short duration, so that the total sum disbursed by the society in respect of them has not exceeded the amount expected and provided for in the table of contributions. There are some signs of an epidemic of influenza, but so far the claims under this heading have not been numerous. Prospectuses and all particulars can be obtained on application to Mr. F. Addiscott, secretary, Medical Sickness and Accident Society, 33, Chancery-lane, London, W.C.

THE ROCHDALE LUNACY CASE.—At a specially convened and thoroughly representative meeting of the Rochdale and District Medical Society held at the Wellington Hotel, Rochdale, on Feb. 24th, the following resolutions were unanimously adopted:—

1. That this meeting, after hearing Dr. Harris's statement of his position as to the charges made against him by the plaintiff in the recent lunacy case, and having carefully considered the evidence, documentary and other, produced in support of such statement, unanimously and unhesitatingly declares its conviction of the unfounded nature of the charges made, and the absolute innocence of Dr. Harris with regard to them.
2. That the members of this society wish to offer to Dr. Harris their profound sympathy in the undeserved trouble brought upon him by no action of his, and to express their regret that owing to legal technicalities he is unable to make public (by reopening the trial) the real facts of the case.
3. That copies of the foregoing resolutions be forwarded to the lay and medical press.

The following are the names of the members of the society present:—James Melvin (President), W. J. Hodgson, Arthur Jefferson, H. Harris, J. A. Menzies, G. Kincaid Pitcairn,

William Stanwell, W. Hirst Bateman, D. Richmond, J. A. Ashcroft, S. T. Lord, A. Wallace, J. G. Standing, H. H. Hitchon, F. W. Hartley, E. Sugden, George W. Malim, A. B. McMaster, W. E. Jameson, John Rodley, M. J. Mahony, E. Baldwin, E. Harvie Cox, F. W. Mackichan, Hector M. Calder, R. Burdett Sellers, Lewis Anderson, A. Dickson, W. P. Grant, W. J. Kerr, W. Pinck, and J. Cuthbertson Walker (secretary).

THE HEALTH OF BARNSTAPLE.—Mr. J. R. Harper, the medical officer of health of Barnstaple, states that during 1909 the birth-rate was 21·57. The death-rate was 12·92 per 1000, being the lowest recorded for the borough. Infant mortality was 70·51, the lowest on record for Barnstaple; the average for the town for the last ten years was 129·01. The zymotic death-rate was 0·13 per 1000 living, the lowest recorded for the town.

PRESENTATIONS TO MEDICAL MEN.—Dr. W. S. Anderson of Chapel-en-le-Frith, Derbyshire, who has unfortunately been obliged by failing health to relinquish his practice, has received a useful and substantial presentation upon his retirement. He went to that town in 1877 and has devoted his whole energies to the practice of his profession ever since, holding the posts of public vaccinator, district medical officer, and medical officer to the workhouse of the Chapel-en-le-Frith Union. The presentation took the form of a cheque and an illuminated address which contained the following words: "Your patients and friends, amongst whom you have laboured for over thirty-two years, wish to place on record their deep appreciation of the great skill, untiring devotion, and loving sympathy you have at all times shown, and as some slight recognition we respectfully ask your acceptance of this address and the accompanying cheque." The cheque was drawn for £320. The presentation was made privately by a deputation, Dr. Anderson being unable to leave his room.—As a proof of their regard for the resident medical officer, the patients of the Forster Green Consumption Hospital, Fortbreda, Belfast, have presented to Mr. Robert May, M.D., Ch.B. Glasg., an oak-framed barometer, a solid silver cigarette box, a case of afternoon tea knives, and a pipe. Dr. May is leaving Ireland to take up a practice in Scotland.—At the recent distribution of medals and certificates to members of the Great Western Railway employees, Chippenham (Wilts) branch of the St. John Ambulance Association, the mayor presented Mr. James R. Briscoe, B.A. Cantab., L.R.C.P. Lond., M.R.C.S. Eng., on behalf of the members, with a framed photograph of the class as a mark of appreciation for his services as honorary instructor.

DONATIONS AND BEQUESTS.—Under the will of the late Mr. John T. Paton, the Royal Infirmary, Edinburgh, the Royal Infirmary, Glasgow, and the Clackmannan County Hospital, Alloa, will receive £1000 each.—The treasurer of Guy's Hospital has received a donation of £1000 from Mr. R. Nivison.—By the will of the late Mr. Samuel Haldane, the Hull Royal Infirmary will receive £5000; the Hull and Sculcoates Dispensary, £1000; the Hull Victoria Hospital for Sick Children, £500; the Hull and East Riding Convalescent Home, Withernsea, £300; the Hull Blind Institution, £100; and the Hull, East Yorks, and Lincolnshire Institution for the Deaf and Dumb, £100.—By the will of the late Mrs. Jane Hannah Thomson, the Royal Hospital for Incurables, Putney, and the Earlswood Asylum for Idiots will each receive £1000, and the Tunbridge Wells General Hospital £500.—By the will of the late Mr. G. H. Swonnell the Bolingbroke Hospital will receive £500, and the Norwood Cottage Hospital and the Croydon General Hospital £250 each. Under the same will about £25,000 will go to King Edward's Hospital Fund for London.—The late Miss Emma Brandreth has by will bequeathed £1000 to King Edward's Hospital Fund for London; £500 to the Royal London Ophthalmic Hospital; and £250 each to Guy's Hospital, Middlesex Hospital, Royal Asylum for Deaf and Dumb, Old Kent-road and Margate; East London Hospital for Children, Shadwell; Poplar Hospital for Accidents, Royal Sea Bathing Hospital, Margate; Cheyne Hospital for Sick and Incurable Children, Royal Dental Hospital, London; London Fever Hospital, New Hospital for Women, Euston; St. Peter's Hospital for Stone, Metropolitan Convalescent Institution, Royal Free Hospital, Gray's Inn-road, and Bolingbroke Hospital, Wandsworth. The residue of her property, amounting to about £29,000, she left for distribution amongst such hospitals or institutions, including those mentioned, as her executors may consider most deserving or most in need of help.—Under the will of the late Mr. Edward Elsey the Nottingham General Hospital will receive a legacy of £1000.

THE ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.—On March 2nd a meeting was held at the Holborn Restaurant for the purpose of forming a permanent organisation in the interests of those medical officers of health who do not devote their whole time to the duties of their primary office. Dr. F. G. Crookshank presided. The report of the acting secretaries of a recently formed provisional committee having been received, it was decided to transfer the assets and liabilities of the provisional committee to the new "Association of Medical Officers of Health." Draft rules were subsequently drawn up and the following officers were elected:—Chairman: Dr. F. G. Crookshank. Honorary secretary: Dr. D. Belilios. Honorary treasurer: Mr. E. Gibbs-Smith. The annual subscription to the society is the nominal sum of 5*s*.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The New Parliament.

IN the new Parliament the controversies over which the General Election was fought are obscuring all other issues. When a House of Commons meets for the first time there are usually Members anxious to bring forward by Bill or motion subjects which lie outside the sphere of party conflict. In the newly elected House of Commons it is otherwise. The Government at a very early stage indicated that their desire was to deal only with finance and with the relation of the two branches of the Legislature. No mention was made of legislation on such an important subject as the reform of the Poor-law. It is generally agreed that whatever contingencies may arise in the uncertain Parliamentary situation this year, there will be little time for the House of Commons to devote itself to anything except what the Government of the day may bring forward.

Nurses Registration Bill.

Mr. MUNRO FERGUSON on Tuesday, March 1st, presented a Bill in the House of Commons "to regulate the qualifications of trained nurses and to provide for their registration." The Bill was read a first time as a matter of course. The honourable Member in presenting this measure is acting in conjunction with Lord AMPTHILL and others who brought this subject forward in the last Session of Parliament. The Bill is receiving wide support amongst all parties in the House.

Tropical Diseases Research Fund.

The report of the Advisory Committee for the Tropical Diseases Research Fund for the year 1909 has been presented to Parliament as a Blue-book. From it, it appears that the revenue at the disposal of the committee was £3470, and the grants which it made amounted to £3333 6*s*. 8*d*. These were distributed as follows: London School of Tropical Medicine, £1383 6*s*. 8*d*.; Liverpool School of Tropical Medicine, £1000; the University of London, £750; and the University of Cambridge, £200. The report notes that various colonial and protectorate Governments have readily responded to the request to continue their contributions for a period of five years, and the Imperial Government and the Government of India have also undertaken to renew their grants for a similar period. The committee expresses in the most emphatic manner its opinion that the work which has been done and is being done at the expense of the fund is of the highest value, and it would be a calamity if the teaching and researches were to be restricted by any shortage in the contributions. The report makes special allusion to the work being carried out to combat sleeping sickness and malaria.

Dogs (Protection) Bill.

Sir FREDERICK BANBURY has introduced a Bill in the House of Commons "to prohibit experiments on dogs." It is backed by Sir FRANCIS CHANNING.

The International Congress of Medicine.

Dr. F. W. PAVY, LL.D., F.R.S., the principal delegate of His Majesty's Government to the International Congress of Medicine held in Budapest last year, has made a report which has been presented to both Houses of Parliament. In his report Dr. PAVY mentions the arrangement that the next Congress, which will meet in 1913, is to be located in London.

The International Office of Public Health.

The Foreign Office has circulated in its Treaty Series of papers the correspondence intimating the accession of Bulgaria to the international agreement of Dec. 9th, 1907, respecting the creation of an International Office of Public Health.

Society of Apothecaries of London Bill.

A private Bill has been introduced in the House of Commons by the

Society of Apothecaries of London. A motion against its second reading has been put on the notice paper by Mr. MOONEY.

HOUSE OF COMMONS.

WEDNESDAY, FEB. 23RD.

The Reform of the Irish Poor-law.

Captain CRAIG asked the Chief Secretary to the Lord Lieutenant of Ireland whether he could state the intention of the Government in regard to the reform of the Poor-law in Ireland.—Mr. BIRRELL replied: The question of the reform of the Irish Poor-law is under consideration in connexion with similar reforms for the rest of the United Kingdom. A Bill on the lines of the recommendations of the Royal Commission and of the Viceregal Commission is in course of preparation, but in present circumstances I cannot say anything as to its introduction.

The Heating and Cleansing of National Schools in Ireland.

Captain CRAIG asked the Chief Secretary to the Lord Lieutenant of Ireland whether it was the intention of the Government to deal this Session with the problem of the heating and cleansing of national schools in Ireland.—Mr. BIRRELL answered: I regret that I am not in a position to make a definite pronouncement upon this subject. I fully recognise that the existing state of things in regard to the heating and cleansing of national schools is far from satisfactory, and I am not without hope that it may be found possible, without undue delay, to arrive at a solution of the problem that will commend itself to all the parties concerned.

THURSDAY, FEB. 24TH.

Milk Legislation.

Captain FABER asked the President of the Local Government Board whether any further power to deal with the milk-supply was to be given by private legislation to any local authority.—Mr. BURNS replied: I am not prepared to make any general statement on this subject at the present time.

The Transport of the Royal Army Medical Corps (Territorial).

Sir SAMUEL SCOTT asked the Secretary of State for War why the harness had not yet been re-issued to the transport of the Royal Army Medical Corps of the Territorial Army.—Mr. HALDANE answered: I am only aware of one instance in which the instructions given on Nov. 12th last in regard to the re-issue of the harness have not been complied with, and inquiries are being made into the circumstances of the case. Perhaps the honourable and gallant Member would be good enough to let me know the particular case or cases to which he refers.

The Royal Commission on Vivisection.

Sir JAMES YOXALL asked the Home Secretary whether he could state on what date the report of the Royal Commission on Vivisection would be made public.—Mr. CHURCHILL wrote in reply: I am informed by the secretary to the Commission that it is impossible, owing to the change of chairman and to the fresh points which have arisen, to state definitely at what date the report is likely to be presented.

MONDAY, FEB. 28TH.

The Lunacy Act, 1890.

Mr. PICKERSGILL asked the Secretary of State for the Home Department whether his attention had been called to the action of Fowler *v.* Grant, tried at the Manchester Assizes last week, in which it appeared that a person now admitted to have been perfectly sane was committed to a lunatic asylum, and there treated as a lunatic for upwards of a year, and especially to the observations of Mr. Justice Walton that a man or woman, not a pauper, might be taken to the workhouse, shut up in an imbecile ward, and then declared to be a lunatic and placed in a lunatic asylum without any public inquiry, any hearing before a magistrate, or any notice of what was going on; and whether he would consider the advisability of making inquiry, by means of a select committee or otherwise, into the working of the Lunacy Act, 1890.—Mr. CHURCHILL replied: I am making inquiries about this matter which I heard of for the first time from my honourable friend's question. I will let him know the result.

Illness amongst Naval Cadets.

Lord CHARLES BERESFORD asked the First Lord of the Admiralty what was the nature of the illness amongst the naval cadets at Osborne College; how many were affected; whether any cases were fatal; whether any trace of the origin of the illness had been discovered; and whether the buildings were hastily erected against the advice of the civil engineering and medical authorities of the Admiralty, who recommended a larger expenditure of money in order to erect more suitable structures.—Mr. MCKENNA answered: The nature of the illness was epidemic influenza, and 244 were affected. The disease is epidemic throughout the country, and has been introduced into the College in the usual way. One case proved fatal from pneumonia and peritonitis. There is no foundation for any of the suggestions contained in the last part of the noble lord's question. In any event the Board of Admiralty in 1908 took full responsibility for the course pursued, and it would be irregular to refer to the advice of individual officials in the Admiralty.

Mr. DOUGLAS HALL: How many epidemics have broken out since the College was opened, and is it a fact that a large number of cadets are constantly absent from duty owing to illness?—Mr. MCKENNA: No. I think it would be desirable to give notice of any question involving figures. I could not undertake to carry in my head the precise numbers.

TUESDAY, MARCH 1ST.

The Administration of the Poor-law.

Mr. STAVELEY-HILL asked the President of the Local Government Board whether he proposed to make any changes in the administration of the Poor-law as a result of the recommendations of the Royal Commission on the Poor-laws.—Mr. BURNS replied: Some administrative action has already been taken in accordance with the recommendations of the Royal Commission and other measures are in contemplation.

The Importation of Chinese Pork.

Mr. FELL asked the President of the Local Government Board whether the whole of the cargo of Chinese pork which was landed at the London Docks in July had been now inspected; and, if so, how many carcasses were condemned by the inspectors and how many had been passed for consumption.—Mr. BURNS answered: I understand that the whole of the cargo in question has been inspected and that the total number of carcasses landed and inspected was 4643. Of these, 391, or 8·4 per cent., were condemned by the inspectors, and the remaining 4252 were passed as fit for consumption.

Mr. FELL also asked the right honourable gentleman whether he had received notice of the arrival in the Thames of any further shipments of Chinese pork.—Mr. BURNS replied: I have received a copy of a report made to the Port of London Sanitary Authority by their medical officer of health, stating that two cargoes of pigs from China had arrived in the port in January last. On preliminary inspection it was found that the pork did not comply with the requirements of the Public Health (Foreign Meat) Regulations, and a notice was therefore served under the regulations by the medical officer of health forbidding removal of the meat for any purpose other than exportation. In answer to another question the right honourable gentleman said: I have not received any formal notice of the arrival of Chinese pork in the port of Liverpool. In the event of such an occurrence the matter would be dealt with at the port of Liverpool by the Customs officers and the medical officer of health, whose action in regard to such a consignment would be governed by the requirements of the Foreign Meat Regulations. These regulations apply to all ports in England and Wales.

Diphtheria in Holderness Villages.

Mr. SNOWDEN asked the President of the Local Government Board whether he was aware that an outbreak of diphtheria had occurred in the villages of Patrington and Keyingham, in the area of the Patrington district council, Holderness, Yorks; that on Feb. 19th the medical officer reported 43 cases; that this was due to the insanitary condition of the villages, to which the medical officer and others had been calling the attention of the council for 10 years; and that recently an inspection of the drains at Keyingham was made, when it was found that there was accumulated sewage to the depth of 3 feet, 2 feet wide, and 200 yards in length; and would he cause an inspector to be sent down to inquire and report.—Mr. BURNS said in reply: I am aware of this outbreak, and have already sent an inspector to the district. He visited the villages last week, and a preliminary report received from him is now under consideration.

The Notification of Births Act.

Mr. VIVIAN asked the President of the Local Government Board how many local authorities had adopted the Notification of Births Act, and what diminution in the infant death-rate, under one year, had taken place.—Mr. BURNS wrote in reply: The Act is now in force in 195 areas of local government—namely, (1) the whole of the administrative county of London, comprising the City of London and the 28 metropolitan boroughs; (2) 46 county boroughs; (3) 46 non-county boroughs; (4) 57 urban districts; (5) 17 rural districts. In the case of 4 non-county boroughs, 7 urban districts, and 16 rural districts the Act is in force by virtue of its adoption by the Worcestershire county council. After giving a list of the various areas which have adopted the Act the right honourable gentleman proceeded: The death-rates of infants during the first year of life published by the Registrar-General for England and Wales show that the figures for the years 1907, 1908, and 1909 were lower than in any previous year recorded, being 118, 120, and 109 respectively per 1000 births. The lowest corresponding figure in any previous year was 128 in 1905.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.

BAKER, M. W., B.C. Cantab., M.R.C.S., L.R.C.P. Lond., has been appointed Junior Obstetric House Physician at St. Thomas's Hospital.

BOWRING, H., M.R.C.S., L.R.C.P. Lond., has been appointed Resident House Physician at St. Thomas's Hospital.

BURRELL, L. S. T., M.R.C.S., L.R.C.P. Lond., has been appointed Casualty Officer and Resident Anæsthetist at St. Thomas's Hospital.

CHAMPNEYS, F. H., M.D. Oxon., F.R.C.P. Lond., has been re-elected Representative of the Royal College of Physicians of London on the Central Midwives Board.

COX, R., M.B., B.C. Cantab., M.R.C.S., L.R.C.P. Lond., has been appointed Casualty Officer and Resident Anæsthetist at St. Thomas's Hospital.

DELLSCHAFT, M. E., M.R.C.S., L.R.C.P. Lond., has been appointed Resident House Physician at St. Thomas's Hospital.

DOUGLAS, CARSTAIRS C., M.D. Edin., F.R.S.E., has been appointed Extern Examiner in Medical Jurisprudence and Hygiene in the National University of Ireland.

FINZEL, HARRY, B.S., M.D. Lond., L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Dental Anæsthetist to the Bristol Royal Infirmary.

GOLDING-BIRD, C. H., M.B., F.R.C.S. Eng., has been re-elected Representative of the Royal College of Surgeons of England on the Central Midwives Board.

GRAHAM-JONES, J. L., M.R.C.S., L.R.C.P. Lond., has been appointed Senior Obstetric House Physician at St. Thomas's Hospital.

GRIEVES, JAMES PERCY, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health by the Portishead (Somerset) District Council.

HOFFMANN, G., M.R.C.S., L.R.C.P. Lond., has been appointed Casualty Officer and Resident Anæsthetist at St. Thomas's Hospital.

HOPWOOD, J. S., M.R.C.S., L.R.C.P. Lond., has been appointed Resident House Surgeon at St. Thomas's Hospital.

JOHNSON, W. B., M.B., B.S. Lond., M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon at St. Thomas's Hospital.

LAUDERDALE, E. M., M.R.C.S., L.R.C.P. Lond., has been appointed Casualty Assistant at St. Thomas's Hospital,

LINNELL, J. E., M.B., B.C. Cantab., D.P.H. Lond., has been appointed Medical Officer of Health to the Sheringham Urban District Council.

MAYBURY, B. C., M.R.C.S., L.R.C.P. Lond., has been appointed Resident House Surgeon at St. Thomas's Hospital.

MEAKIN, L., B.C. Cantab., M.R.C.S., L.R.C.P. Lond., has been appointed Casualty Officer and Resident Anæsthetist at St. Thomas's Hospital.

MORCOM, A. F., M.R.C.S., L.R.C.P. Lond., has been appointed Resident House Surgeon at St. Thomas's Hospital.

NEWSHOLME, H. P., M.B., B.Ch. Oxon., B.Sc. Lond., has been appointed Resident House Physician at St. Thomas's Hospital.

PARKINSON, W. R., M.R.C.S., L.R.C.P. Lond., has been appointed Resident House Surgeon at St. Thomas's Hospital.

PERRY, L. B., B.C. Cantab., M.R.C.S., L.R.C.P. Lond., has been appointed Casualty Officer and Resident Anæsthetist at St. Thomas's Hospital.

PRATT, ELDON, M.D. Lond., M.R.C.S., L.R.C.P. Lond., has been appointed Honorary Surgeon to the Whitehaven and West Cumberland Infirmary.

PRIDHAM, F. C., M.R.C.S., L.R.C.P. Lond., has been appointed Resident House Physician at St. Thomas's Hospital.

SCOTT, S. GILBERT, M.R.C.S., L.R.C.P., has been appointed Medical Officer in Charge of the X Ray Department at the London Hospital.

SEYMOUR, E. A., M.R.C.S., L.R.C.P. Lond., has been appointed Casualty Assistant at St. Thomas's Hospital.

SMITH, KENNETH RAWLINGS, M.D., B.S. Lond., M.R.C.S., L.S.A., has been appointed Medical Officer of Health of the Borough of Totnes (Devon).

STANLEY, J. B., M.R.C.S., L.R.C.P. Lond., has been appointed Assistant Surgeon to the Burton-on-Trent Infirmary.

TOPLEY, W. W. C., M.R.C.S., L.R.C.P. Lond., has been appointed Resident House Physician at St. Thomas's Hospital.

WAINWRIGHT, G. B., M.R.C.S., L.R.C.P. Lond., has been appointed Casualty Officer and Resident Anæsthetist at St. Thomas's Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ASHTON-UNDER-LYNE UNION.—Assistant Medical Officer. Salary £130 per annum.

BIRMINGHAM, QUEEN'S HOSPITAL.—House Surgeon for six months. Salary at rate of £50 per annum, with board, lodging, and washing.

BRADFORD CHILDREN'S HOSPITAL.—House Surgeon. Salary £100.

BROMLEY, BOROUGH OF.—Temporary School Medical Officer (female). Salary at rate of £20 per calendar month.

CARDIFF, UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE.—Professor of Pathology and Bacteriology. Salary £450 per annum. Also Lecturer in Histology and Embryology. Salary £200 per annum.

CARLISLE, CUMBERLAND INFIRMARY.—Resident Medical Officer. Salary at rate of £80 per annum, with board, lodging, and washing.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn-road, W.C.—House Surgeon. Salary at rate of £50 per annum, with board and residence.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Clinical Assistant.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Physician. Salary 40 guineas per annum. Also House Physician for six months. Salary at rate of £75 per annum, with board, washing, and residence.

CITY OF LONDON LYING-IN HOSPITAL, City-road, E.C.—Resident Medical Officer for six months. Salary at rate of £50 per annum, with board, lodging, and washing.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—House Surgeon. Salary at rate of £75 per annum, with board and residence.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway, N.—Senior House Surgeon, two Junior House Surgeons, Senior House Physician, and Junior House Physician, in each case for six months. Salary of senior officers at rate of £45 per annum and of junior officers £35 per annum, with board, lodging, and washing.

HUDDERSFIELD INFIRMARY.—Senior Assistant House Surgeon. Also Junior House Surgeon. Salaries £80 and £60 per annum respectively, with board, residence, and washing.

HULL, ROYAL INFIRMARY.—House Physician, unmarried. Salary £100 per annum, with board and apartments.

KINGSTON, PARISH OF, JAMAICA.—Health Officer. Salary £350.

LEEDS TUBERCULOSIS ASSOCIATION SANATORIUM, Gateforth, near Selby.—Resident Medical Officer for six months. Salary at rate of £100 per annum, with board, lodging, and washing.

LIVERPOOL INFIRMARY FOR CHILDREN.—Resident House Surgeon. Salary at rate of £60 a year, with board and lodging.

LIVERPOOL, ROYAL SOUTHERN HOSPITAL.—House Physician and House Surgeon for six months. Salary at rate of £60 per annum, with board and residence.

MACCLESFIELD GENERAL INFIRMARY.—Junior House Surgeon. Salary £60 per annum, with board and residence.

MANCHESTER CHILDREN'S HOSPITAL, Pendlebury.—Resident Medical Officer, unmarried. Salary for first six months £40, for second six months £50.

MANCHESTER, COUNTY ASYLUM, Prestwich.—Junior Assistant Medical Officer, unmarried. Salary £150 per annum, with board, apartments, and washing.

MARGATE, ROYAL SEA BATHING HOSPITAL.—Resident Surgeon. Salary at rate of £80 per annum, with board and residence.

MIDDLESEX HOSPITAL, W.—Medical Registrar.

MILLER GENERAL HOSPITAL FOR SOUTH-EAST LONDON, Greenwich-road, S.E.—Junior House Surgeon for six months. Salary at rate of £80 per annum, with board, residence, and laundry.

NATIONAL HOSPITAL FOR DISEASES OF THE HEART, Soho-square, W.—Honorary Assistant Physician.

NEW HOSPITAL FOR WOMEN.—Medical Officer to take charge of the Mechano-Therapeutic Department; also Clinical Assistant; also Senior Assistants (females).

NORWICH, JENNY LIND INFIRMARY FOR CHILDREN, Unthank-road.—Resident Medical Officer (female). Salary £50 per annum, with board, apartments, and laundry.

NORWICH, NORFOLK EDUCATION COMMITTEE.—Assistant Medical Officer. Salary £250 per annum.

NOTTINGHAM GENERAL HOSPITAL.—Honorary Physician.

PRINCE OF WALES'S GENERAL HOSPITAL, Tottenham, N.—Clinical Assistant.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney-road, Bethnal Green, E.—Assistant Resident Medical Officer. Salary £75 per annum, with board, residence, and washing. Also Pathologist and Registrar. Salary £200 per annum. Also House Surgeon for six months. Salary at rate of £60 per annum, with board, residence, and washing. Also Surgeon in Charge of Out-patient Department for the Ear, Nose, and Throat.

REETH UNION AND RURAL DISTRICT COUNCIL, Yorkshire.—Medical Officer and Medical Officer of Health. Salary £96 per annum.

ROYAL FREE HOSPITAL, Gray's Inn-road, W.C.—Senior Resident Medical Officer. Salary £100 per annum, with board, residence, and washing.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, E.C.—Honorary Dental Surgeon.

ROYAL INSTITUTE OF PUBLIC HEALTH.—Junior Demonstrator of Bacteriology and Comparative Pathology. Salary £100 per annum.

ROYAL NAVAL MEDICAL SERVICE.—Examination for Fifteen Commissions.

SALFORD ROYAL HOSPITAL.—House Surgeon, also Junior House Surgeon, both for six months. Salaries at rate of £60 and £50 per annum respectively, with board and residence.

SALFORD UNION INFIRMARY, Hope, Pendleton.—Two Resident Medical Officers. Salary £120 per annum, with apartments, attendance, and rations. Also Medical Superintendent. Salary £350 per annum.

SHEFFIELD ROYAL INFIRMARY.—Seventh Resident Medical Officer. Salary £60 per annum, with board and residence.

SHREWSBURY, SALOP INFIRMARY.—House Surgeon, unmarried. Salary £100 per annum, with board, washing, and residence.

SOUTH SHIELDS, INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Secretary. Salary at rate of £150 per annum.

STAFFORD, STAFFORDSHIRE GENERAL INFIRMARY.—Assistant House Surgeon. Salary £82 per annum, with board, residence, and laundry.

SURGICAL AID SOCIETY, Salisbury-square, Fleet-street, E.C.—Surgeon.

WARRINGTON INFIRMARY AND DISPENSARY.—Junior House Surgeon. Salary at rate of £100 per annum, with board, lodging, and laundry.

WINCHESTER, ROYAL HAMPSHIRE COUNTY HOSPITAL.—House Physician.

WISBECH, NORTH CAMBRIDGESHIRE HOSPITAL.—Resident Medical Officer. Salary £150 per annum, with unfurnished house.

Births, Marriages, and Deaths.

BIRTHS.

CLARKE.—On Feb. 12th, at Carlton House, Quex-road, West Hampstead, N.W., the wife of Colin Clarke, F.R.C.S., R.A.M.C., of a daughter.

GAYNER.—On Feb. 22nd, at Redhill, Surrey, the wife of Francis Gayner, M.A., M.B., B.C. Cantab., of a son.

TURNER.—On Feb. 27th, at 17, Harley-street, W., the wife of William Turner, M.S., F.R.C.S., of a son (Douglas Hamilton).

DEATHS.

CLARK.—On Feb. 24th, at Lichfield, James Clark (only son of John Clark), M.D. Univ. Aberdeen, L.R.C.S.E., F.R.C.S.E., aged 75. Friends please accept this (the only) intimation.

LE ROSSIGNOL.—On Feb. 18th, at Cæsarea-place, St. Saviour's-road, Jersey, Augustin Le Rossignol, M.D., C.M., Jurat of the Royal Court of Jersey, in his 68th year.

SPENCE.—At St. Ninians, Burntisland, on Feb. 24th, Robert Spence, M.B., C.M., aged 62 years.

TAYLOR.—On Feb. 26th, at Newhall-street, Birmingham, John W. Taylor, F.R.C.S., M.Sc., late Senior Surgeon to the Birmingham and Midland Hospital for Women, and Professor of Gynæcology in the University of Birmingham.

IN MEMORIAM.

WAKLEY.—On March 5th, 1909, at 16, Hyde Park-gate, S.W., Thomas Wakley, L.R.C.P. Lond., only son of the late Thomas Henry Wakley, F.R.C.S. Eng., and grandson of the late Thomas Wakley, M.P., aged 57 years.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE APPEAL OF "DR." BODIE DISMISSED.

A LITTLE over three months ago the person known as "Dr. Bodie" was sued in the King's Bench Division for the return of £1000 which the plaintiff, a young man named Irving, alleged to have been obtained from him by fraudulent misrepresentation. The trial before Mr. Justice Darling attracted universal attention so recently that it is not necessary to recapitulate in detail the promise by the defendant that he would instruct the plaintiff in his business, and the representations made with regard to the stage entertainment given by him, to its alleged scientific character, and to his elaborate pretence of scientific attainments. The jury found that the defendant by false and fraudulent representations induced the plaintiff to enter into the agreement; that the defendant broke the agreement to teach the plaintiff in the terms of the agreement; and that the £1000 should be returned. The appeal has not taken long in reaching the Lords Justices, and was recently concluded. It was upon the grounds that the judge misdirected the jury, that the verdict was against the weight of evidence, and that the damages were excessive. The court which heard it, consisting of the Master of the Rolls, and Lords Justices Moulton and Buckley, listened to the arguments of the appellant's counsel with a certain amount of interruption and comment and did not call upon counsel for the defendant to reply, dismissing the appeal with costs and with forcible expressions of opinion upon the methods of the plaintiff, and particularly upon his use of bogus medical titles and so-called diplomas. The Master of the Rolls, in giving judgment, said that "he had never read a summing-up more clear, more directly addressed to the real points, and more free from objection on every possible ground than that of Mr. Justice Darling. What was the confessed, the avowed fact? That the defendant before the agreement was signed, for the purpose of getting it signed and obtaining the money, showed plaintiff some documents, so-called diplomas, one of which described defendant as a doctor of medicine, something or other of surgery, and a doctor of philosophy. One was in consideration of his having passed a satisfactory examination and attended a course of instruction, which he confessed he had never done. Other documents had reference to his classical acquirements. He told the plaintiff that he was a duly qualified doctor. A more gross lie his lordship could not imagine. ..... The plaintiff's allegation was proved to the hilt. The fact that the defendant did not teach the plaintiff anything was final proof of the fact that he was an ignorant unscrupulous quack at the time he obtained this money. It would be waste of words to say much more." Lords Justices Moulton and Buckley concurred, commenting on the hopelessness of the appeal and expressing surprise that it should have been attempted.

WANTED—TREATMENT FOR HEADACHE.

To the Editor of THE LANCET.

SIR,—This type of headache is not infrequently met with in hard-working people of neurasthenic tendencies, and is due, apparently, to some abnormal condition of the blood. At any rate, it may often be relieved by calcium acetate gr. x. t.i.d., given half an hour before meals, and I would advise "Cambria" to try this.

I am, Sir, yours faithfully,
Wimpole-street, W., Feb. 26th, 1910. ERNEST YOUNG.

To the Editor of THE LANCET.

SIR,—The headaches present on awakening in "Cambria's" patient (THE LANCET, Feb. 26th, p. 619) are in all probability "hyperpyræmic" (Food Factor in Disease, vol. i., p. 227, *et seq.*). Such are due to the marked fall in the rate of combustion which always sets in during sleep (Op. cit., vol. i., p. 96, Fig. 2), and to the consequent carbonaceous accumulation in the blood. The treatment is simple and nearly always successful. For the morning headache, the last meal of the day should be a small one: it should contain no sugar, and but little starch or fat. It should be taken rather early in the evening; and between it and bedtime the patient should take some physical exercise, say, a brisk walk. Further, nothing should be taken before retiring, except water, preferably hot. For headaches during the day avoid sleep for at least three hours after food.

I am, Sir, yours faithfully,
Beckenham Park, Kent, Feb. 28th, 1910. FRANCIS HARE.

THE FOLKLORE OF MENSTRUATION.

To the Editor of THE LANCET.

SIR,—You had a recent note in your valuable journal regarding the reputed influence of menstruating women upon surrounding objects. It may be of interest to some of your readers to recall a passage from a black-letter book, the "Secretes of Don Alexis," which was until lately in my possession. Quoting from memory, the heading of the paragraph ran: "To kill lice and other venomous insects that do marre the gardens."—"Let a woman that hath her flowres walk two or three times up and down the alleys, and straightway the venomous beastes shall fall doune dedde."

This quotation, being from memory, is perhaps not literally accurate, but anyone wishing to obtain the exact passage will find the book in the library of the Medical Society of London. I may add that I picked up this interesting book in a small town in Westmoreland. The bookseller from whom I obtained it said that it had been for many generations in a family of yeomen. Some of the passages had been crossed out with heavy ink lines, and among them was that quoted above, for reasons that are more or less apparent.

My copy once belonged to one Franciscus Looker, a physician, who had annotated the book throughout in a quaint mediæval handwriting. In not a few of the grotesque, and sometimes repulsive, remedies it is interesting to trace the beginnings of our modern scientific therapeusis, more especially, perhaps, in the region of organotherapy.

I am, Sir, yours faithfully,
Welbeck-street, W., Feb. 25th, 1910. DAVID WALSH.

THE INTER-HOSPITAL RUGBY CUP-TIES.

Second Round.

Guy's Hospital v. *University College Hospital.*

UNIVERSITY have this season a useful side, stronger fore and aft than they have had since N. C. Fletcher was a power in the pack. The English international had a way of dominating a side and a game. The football of his hospital is associated with his name, and those who can call to mind a great fight between University and London in an early round of the competition some years ago will not readily forget the part played by Fletcher. London owed their escape that day to another English international forward, C. T. Scott. The memory of these great forwards and their work that day must have come forcibly home to University men in this game. University were well together in the first round. Smith, an eleventh-hour find, proved more than useful at half. Much was expected of Twining. The side was greatly heartened by the narrow margin by which Guy's had knocked out Charing Cross, and so University came to this game with every confidence in their ability to put up a great fight. But they found Guy's in a very different mood. The Kent men were in no mind for another fright. Jones was back in the side, and the Welshman has no faith in easies and breathers. Guy's meant business, so one saw a great side on its mettle, and the result was disastrous to University ambitions. For 20 minutes there was every prospect of a stern struggle. The University forwards worked with a will. Smith and Twining played their part well. Then the fierce energy of the lighter pack died away and the ball was always amongst the Guy's backs. The work of these men must have greatly heartened their forwards. The muddy ball did not seem to worry them. The handling was well done. And gradually University lost heart. The faultless precision of the movements was indeed admirable. The final score, 43 points to nil, in no way flattered the winners. The game was unfortunately marred by an accident to F. B. Smith, one of the University halves, who late in the second half slipped and broke his leg. He had done all that one man could to turn the tide. Guy's only scored once more after he left the field.

Guy's.—G. E. C. Lacey (back), L. B. Stringer, J. P. Jones, H. Lee, A. L. Stokes (three-quarters), C. H. Medlock and L. G. Saner (halves), G. R. Hind, A. H. Crook, C. S. L. Roberts, W. S. Stranach, W. E. Williams, R. S. Kennedy, A. V. Moberley, and H. Gibb (forwards).

University College Hospital.—C. E. A. Goddard (back), L. S. Kempthorne, E. W. Twining, R. E. Martin, and E. B. Jardine (three-quarters), D. O. Twining and F. B. Smith (halves), A. R. N. MacGillycuddy (captain), W. G. Beauchamp, M. H. Barton, G. W. R. Rudkin, G. F. Garraway, G. O. Hempson, B. N. Norman, and J. Winterbotham (forwards).

EXPLOSIVE COUGH MIXTURES.

To the Editor of THE LANCET.

SIR,—In order to investigate the problem by "Practitioner" it will be necessary for him to give the preparations of the drugs he mentions that constitute the "cough mixture," as it is most probable that some ingredient of the menstrua will cause the decomposition.

I am, Sir, yours faithfully,
Terenure, Dublin, Feb. 26th, 1910. NINIAN M. FALKINER.

LONGEVITY AT BRIGHTON.

ATTENTION is again called to cases of remarkable longevity at Brighton by the fact that on Feb. 28th Mrs. Sarah Sinden attained the 100th anniversary of her birthday. She has been for many years an inmate of the workhouse infirmary, and in the next bed reposes Mrs. Frances Norman, who became a centenarian on Nov. 5th last. Mrs. Sinden is wonderfully bright, quick in hearing, and enjoys excellent health. She attributes her long life to hard work and speaks with pride of her large family—11 in number. Both Mrs. Sinden and Mrs. Norman are natives of Brighton. The town has other centenarians, including the oldest gardener, Mr. Jeremiah Simmons, who will be 102 in a few weeks' time. It has also in its midst the oldest barrister, the oldest solicitor, the oldest actor, the oldest acting alderman, and the oldest native Indian. Can any town of like size match this record?

M.D. in general practice and about to furnish a consulting-room 13 feet square will welcome any suggestions as to the most suitable kind of furniture, wood, desk, couch, and floor covering. Is there any form of gas lamp at a moderate price which can also be used for ophthalmoscopic and laryngoscopic examination?

M.D.—We are aware that the association in question has a commercial side, but there seems to be no doubt that it does good work in educating the general public.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY OF MEDICINE, 20, Hanover-square, W.

TUESDAY.

SURGICAL SECTION (Hon. Secretaries—Walter G. Spencer, Jonathan Hutchinson): at 5.30 P.M.

Papers:

Mr. Somerville Hastings: Rupture of the Tunica Vaginalis in Hydroceles.

Dr. W. Soltau Fenwick: The Clinical Significance of Gastric Hypersecretion and its Connexion with Latent Disease of the Appendix.

Mr. H. Paterson: Appendicular Gastralgia, or the Appendix as a Cause of Gastric Symptoms.

WEDNESDAY.

BALNEOLOGICAL AND CLIMATOLOGICAL SECTION (Hon. Secretaries—Septimus Sunderland, F. A. de T. Mouillot): at 5.30 P.M.

Discussion:

On Arthritis Deformans (will be opened by Dr. Llewelyn Jones, Bath).

THURSDAY.

OBSTETRICAL AND GYNÆCOLOGICAL SECTION (Hon. Secretaries—William J. Gow, G. F. Blacker): at 7.45 P.M.

Specimens:

Dr. F. J. McCann: (1) Sarcoma of Cervix Removed by Abdominal Colpo-hysterectomy; (2) Abdominal Pregnancy.

Demonstration with epidiascope:

Mr. T. Carwardine: Microscopical Appearances in Tubal Pregnancy.

Short Communication:

Dr. Russell Andrews: Carcinoma of the Cervix of a Prolapsed Uterus with Contact Carcinoma of the Vulva.

FRIDAY.

CLINICAL SECTION (Hon. Secretaries: H. D. Rolleston, Albert Carless): at 8 P.M.

Clinical Cases.

MEDICAL SOCIETY OF LONDON, 11, Chandos-street, Cavendish-square, W.

MONDAY.—9 P.M., Dr. J. S. R. Russell: The Cerebellum and its Affections (Lettsomian Lecture).

UNITED SERVICES MEDICAL SOCIETY, Royal Army Medical College, Grosvenor-road, S.W.

WEDNESDAY.—8.30 P.M., Staff-Surgeon H. C. Adams, R.N.: Treatment of Syphilis by Intramuscular Injection of Metallic Mercury. Notes on Mercurial Creams, &c.

HUNTERIAN SOCIETY, London Institution, Finsbury-circus, E.C.

WEDNESDAY.—8.30 P.M., Short Papers by Dr. J. H. Sequeira, Dr. Ettles, and Dr. T. Thompson.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM, 11, Chandos-street, Cavendish-square, W.

THURSDAY.—8 P.M., Card Exhibits by Dr. T. H. Butler and others. Mr. M. L. Hepburn: Xerosis of the Conjunctiva and Night Blindness. Mr. R. R. Somes: A Contribution to the Bacteriology of Panophthalmitis.

SOCIETY OF MEDICAL OFFICERS OF HEALTH, 1, Upper Montague-street, Russell-square, W.C.

FRIDAY.—5 P.M., Dr. T. W. Naylor-Barlow: Disinfectants.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East.

TUESDAY.—5 P.M., Dr. J. S. Bolton: A Contribution to the Localisation of Cerebral Function, based on the Clinico-Pathological Study of Mental Disease. (Goulstonian Lecture.)

THURSDAY.—5 P.M., Prof. W. Osler: Angina Pectoris. (Lumleian Lecture.)

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C.

MONDAY.—5 P.M., Prof. R. H. Paramore: The Evolution of the Pelvic Floor in Non-Mammalian Vertebrates and Pronograde Mammals. (Hunterian Lecture.)

WEDNESDAY AND FRIDAY.—5 P.M., Prof. C. Bolton: The Pathology of Gastric Ulcer.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies-street, W.C.

MONDAY.—4 P.M., Dr. H. G. Adamson: Clinique (Skin). 5.15 P.M., Lecture:—Dr. F. J. McCann: The Treatment of Puerperal Infection.

TUESDAY.—4 P.M., Sir William Gowers: Clinique (Medical). 5.15 P.M., Lecture:—Dr. N. Raw (Liverpool): The Treatment of Pulmonary Tuberculosis by Bovine Tuberculin—Results of Treatment.

WEDNESDAY.—4 P.M., Mr. M. White: Clinique (Surgical). 5.15 P.M., Lecture:—Mr. G. L. Cheatle: Cancer of the Tongue.

THURSDAY.—4 P.M., Mr. Jackson Clarke: Clinique (Surgical). 5.15 P.M., Lecture—Dr. A. P. Luff: The Treatment of Some of the Forms of Chronic Rheumatism.

FRIDAY.—4 P.M., Dr. J. D. Grant: Clinique (Ear, Nose and Throat).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

MONDAY.—10 A.M., Lecture:—Surgical Registrar: Demonstration of Cases in Wards. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Dunn: Diseases of the Eyes. 2.30 P.M., Operations. 5 P.M., Lecture:—Mr. Dunn: Some Clinical Facts in the Study of Ophthalmic Disease.

TUESDAY.—10 A.M., Dr. Moullin: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Operations. Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Mr. Pardoe: Clinical.

WEDNESDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Diseases of the Throat, Nose, and Ear. 12.15 P.M., Lecture:—Dr. G. Stewart: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. B. Harman: Diseases of the Eyes. 2.30 P.M., Operations. Dr. Robinson: Diseases of Women. 5 P.M., Lecture:—Dr. Beddard: Medicine.

THURSDAY.—10 A.M., Lecture:—Surgical Registrar: Demonstration of Cases in Wards. 12 noon, Pathological Demonstration:—Dr. Bernstein. 2 P.M., Medical and Surgical Clinics. X Rays. Dr. Davis: Diseases of the Nose, Throat, and Ear. 2.30 P.M., Operations. Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Dr. Davis: Tonsillitis, Quinsy, Diphtheria, and Treatment.

FRIDAY.—10 A.M., Dr. Moullin: Gynæcological Operations. Medical Registrar: Demonstration of Cases in the Wards. 2 P.M., Medical and Surgical Clinics. X Rays. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Operations. Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Dr. G. Stewart: Compression Paraplegia.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

MONDAY.—Clinics:—10 A.M., Surgical Out-patient (Mr. Howell Evans), 2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Nose, Throat, and Ear (Mr. H. W. Carson). 4.30 P.M., Medical In-patient (Dr. A. J. Whiting).

TUESDAY.—Clinic: 10 A.M., Medical Out-patient (Dr. A. G Auld). 2.30 P.M., Operations. Clinics:—Surgical (Mr. W. Edmunds); Gynæcological (Dr. A. E. Giles). 4.30 P.M., Lecture:—Dr. A. J. Whiting: Colitis and Pericolitis.

WEDNESDAY.—Clinics:—2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Skin (Dr. G. N. Meachen); Eye (Mr. R. P. Brooks). 3 P.M., X Rays (Dr. A. H. Pirie).

THURSDAY.—2.30 P.M., Gynæcological Operations (Dr. A. E. Giles). Clinics:—Medical Out-patient (Dr. A. J. Whiting); Surgical (Mr. Carson). 3 P.M., Medical In-patient (Dr. G. P. Chappel). 4.30 P.M., Lecture:—Dr. G. B. Price: The Clinical Features of Some Unusual Abdominal Tumours.

FRIDAY.—10 A.M., Clinic:—Surgical Out-patient (Mr. Howell Evans). 2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld); Eye (Mr. R. P. Brooks). 3 P.M., Medical In-patient (Dr. R. M. Leslie).

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.

MONDAY.—2 P.M., Operations. 2.15 P.M., Mr. Turner: Surgery. 3.15 P.M., Sir Dyce Duckworth: Medicine. 4 P.M., Mr. R. Lake: Ear and Throat. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat. 2.15 P.M., Special Lecture:—Mr. W. Turner: Stricture.

TUESDAY.—2 P.M., Operations. 2.15 P.M., Dr. R. Wells: Medicine. 3.15 P.M., Mr. Carless: Surgery. 4 P.M., Sir M. Morris: Diseases of the Skin. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin. 2.15 P.M., Special Lecture:—Prof. R. T. Hewlett: The Wassermann Reaction.

WEDNESDAY.—2 P.M., Operations. 2.15 P.M., Dr. F. Taylor: Medicine. 3.30 P.M., Mr. Cargill: Ophthalmology. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 11 A.M., Eye.

THURSDAY.—2 P.M., Operations. 2.15 P.M., Dr. G. Rankin: Medicine. 3.15 P.M., Sir W. Bennett: Surgery. 4 P.M., Dr. Sale-Barker: Radiography. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat.

FRIDAY.—2 P.M., Operations. 2.15 P.M., Dr. R. Bradford: Medicine. 3.15 P.M., Mr. McGavin: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin.

SATURDAY.—2 P.M., Operations. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 11 A.M., Eye.

ROYAL FREE HOSPITAL.

WEDNESDAY.—4 P.M., The Earl of Sandwich presides at the Annual Court of Governors.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury, W.C.

TUESDAY.—3.30 P.M., Clinical Lecture:—Dr. J. Collier: Acute Encephalitis.

FRIDAY.—3.30 P.M., Clinical Lecture;—Dr. J. Collier: Apraxia and Agnosia.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, 73, Welbeck-street, W

MONDAY.—3 P.M., Clinical Demonstration: Dr. H. Campbell.

TUESDAY.—5 P.M., Clinical Demonstration:—Dr. J. Mackenzie.

WEDNESDAY.—3 P.M., Clinical Demonstration:—Dr. F. Palmer.

FRIDAY.—2 P.M., Clinical Demonstration:—Dr. P. Stewart. 5.30 P.M., Clinical Demonstration: Dr. E. Macnamara.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn-road, W.C.

THURSDAY.—4.30 P.M., Clinical Lecture:—Dr. W. Wingrave: A Summary of Recent Pathological Experience in the Practice of the Hospital.

ST. MARK'S HOSPITAL FOR CANCER AND OTHER DISEASES OF THE RECTUM, City-road, E.C.

MONDAY.—5.30 P.M., Lecture:—Mr. F. S. Edwards: Prolapse and Procidentia.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, Leicester-square, W.C.

THURSDAY.—6 P.M., Chesterfield Lecture:—Fungus Diseases of Hair (continued): III., Favus; IV., Leptothrix.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (7th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M.), St. Mark's (2.30 P.M.), Central London Throat and Ear (Minor 9 A.M., Major 2 P.M.).

TUESDAY (8th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College 2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M., Ophthalmic, 2 P.M.), Tottenham (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

WEDNESDAY (9th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan 9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Royal Orthopædic (3 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

THURSDAY (10th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Orthopædic (9 A.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M.), Tottenham (Gynæcological, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, (9 A.M., Major, 2 P.M.).

FRIDAY (11th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.) Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.), Central London Throat and Ear (Minor 9 A.M., Major, 2 P.M.).

SATURDAY (12th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 A.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M.), West London (2.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention should be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. II. of 1909 were given in THE LANCET of Dec. 25th, 1909.

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(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, March 2nd, 1910.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Feb. 24	29·58	S.W.	0·03	74	48	38	42	42	Raining
,, 25	29·32	S.W.	0·31	85	51	42	46	47	Overcast
,, 26	29·20	W.	0·21	77	49	40	41	42	Cloudy
,, 27	29·58	W.	0·03	80	44	38	37	40	Cloudy
,, 28	29·77	S.W.	...	51	47	37	40	41	Raining
Mar. 1	30·02	S.W.	0·13	83	48	36	37	37	Fine
,, 2	30·14	S.W.	...	93	52	37	43	44	Overcast

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